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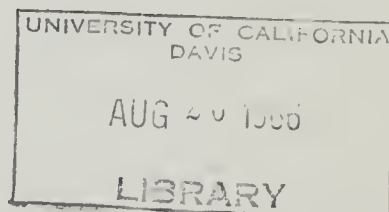
State of California
THE RESOURCES AGENCY
Department of Water Resources

BULLETIN No. 130-64

HYDROLOGIC DATA: 1964

Volume IV: SAN JOAQUIN VALLEY

DECEMBER 1965



HUGO FISHER
Administrator
The Resources Agency

EDMUND G. BROWN
Governor
State of California

WILLIAM E. WARNE
Director
Department of Water Resources

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ORGANIZATION OF BULLETIN NO. 130 SERIES

Volume I - NORTH COASTAL AREA

Volume II - NORTHEASTERN CALIFORNIA

Volume III - CENTRAL COASTAL AREA

Volume IV - SAN JOAQUIN VALLEY

Volume V - SOUTHERN CALIFORNIA

Each volume consists of the following:

TEXT and

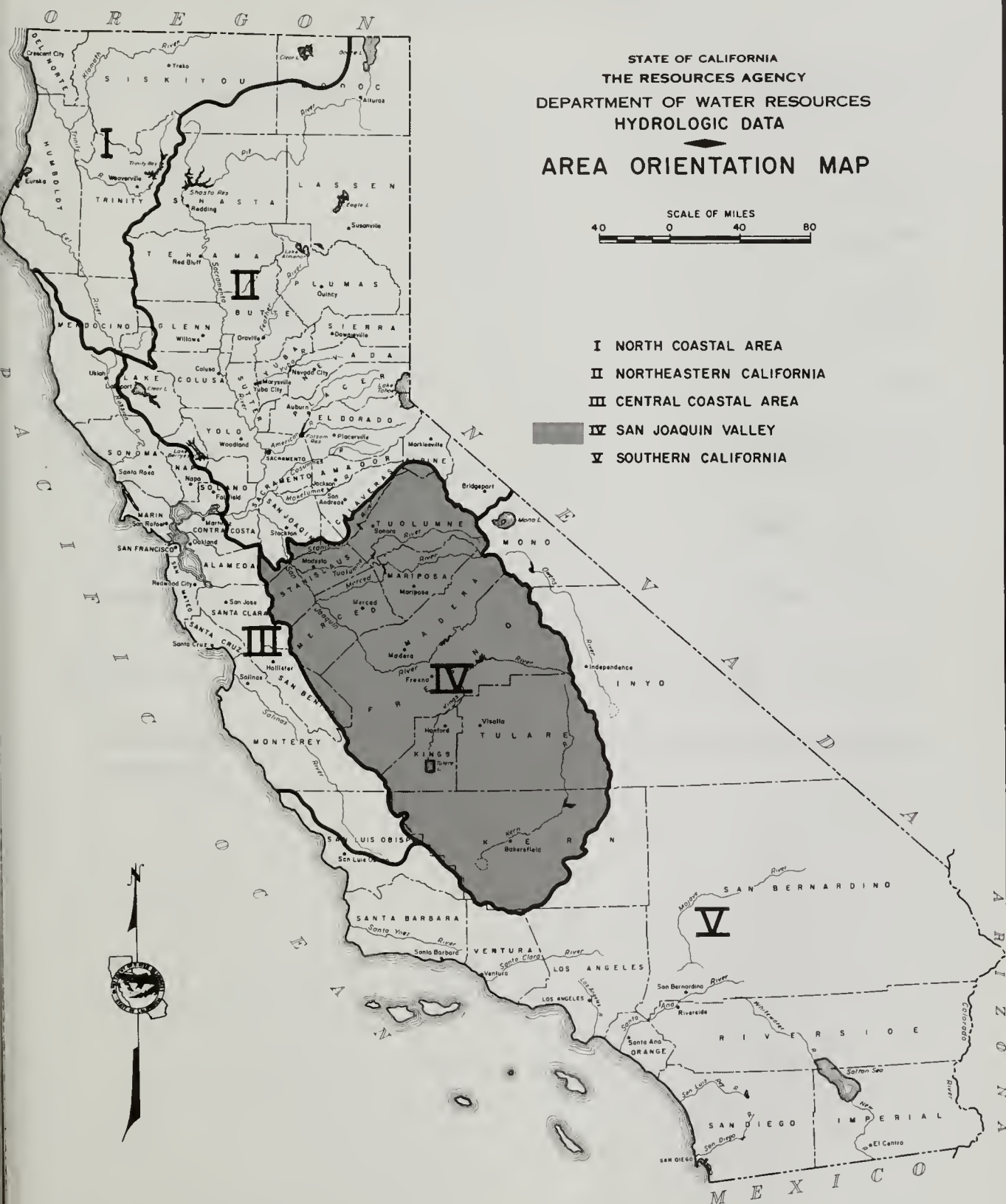
Appendix A - CLIMATE

Appendix B - SURFACE WATER FLOW

Appendix C - GROUND WATER MEASUREMENTS

Appendix D - SURFACE WATER QUALITY

Appendix E - GROUND WATER QUALITY



METRIC CONVERSION TABLE

ENGLISH UNIT	EQUIVALENT METRIC UNIT	
Inch (in)	2.54	Centimeters
Foot (ft)	0.3048	Meter
Mile (mi)	1.609	Kilometers
Acre	0.405	Hectare
Square mile (sq. mi.)	2.590	Square kilometer
U. S. gallon (gal)	3.785	Liters
Acre foot (acre-ft)	1,233.5	Cubic meters
U. S. gallon per minute (gpm)	0.0631	Liters per second
Cubic feet per second (cfs)	1.7	Cubic meters per minute

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DEPARTMENT OF WATER RESOURCES

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November 1, 1965

Honorable Edmund G. Brown, Governor,
and Members of the Legislature of
the State of California

Gentlemen:

Bulletin No. 130-64, entitled "Hydrologic Data, Volume IV, San Joaquin Valley", presents data on hydrologic conditions in the San Joaquin Valley during the 1964 reporting year.

This bulletin is the second of a series which incorporates data on surface water, ground water, and climate published annually.

Bulletin No. 130 will be published annually in five volumes, each volume to report hydrologic data for one of five specific reporting areas of the State. The area orientation map on page iii delineates these areas. Page ii outlines the organization of the bulletin, its volumes, and appendixes.

The collection and publication of data as contained in Bulletin No. 130 are authorized by Sections 225, 226, 229, 230, 232, 345, 12609, and 12616 of the California Water Code.

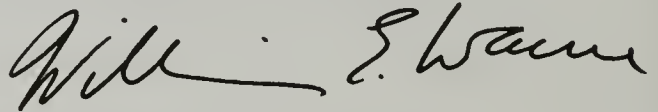
The basic data programs of the Department of Water Resources have been designed to supplement the activities of other agencies to satisfy specific needs of the State. Bulletin No. 130 presents to the public useful, comprehensive, accurate, timely hydrologic data, which are prerequisites for effective planning, design, construction, and operation of water facilities.

Collection of much of the data presented has been possible only because of the generous cooperation and assistance of others. I wish to especially acknowledge

the assistance of the United States Bureau of Reclamation, Geological Survey, Corps of Engineers, Weather Bureau, and Forest Service, as well as the Kern County Surveyors Office and Kern County Land Company.

The districts, private companies, and individuals are too numerous to list here; however, these cooperators are shown in the tables where appropriate. Without their assistance Bulletin 130-64 would be a much less valuable tool.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Will E. Swann". The signature is fluid and cursive, with a long horizontal stroke extending from the "W" across the middle of the line.

Director

State of California
The Resources Agency
Department of Water Resources

EDMUND G. BROWN, Governor
HUGO FISHER, Administrator, The Resources Agency of California
WILLIAM E. WARNE, Director, Department of Water Resources
ALFRED R. GOLZE', Chief Engineer

This report prepared under the direction of
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by the

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CHAPTER I. INTRODUCTION

This is Volume IV, Bulletin 130-64, entitled "Hydrologic Data". It is the second of an annual series of reports which present basic data. The five volumes of the bulletin embrace the entire State of California, each volume being prepared by the area branch or district of the Department responsible for the publication of the data collected in its respective area. These areas are shown on the frontispiece map.

This report contains a record of hydrologic data collected and assembled by the San Joaquin District of the Department of Water Resources. It brings together in a permanent and usable form the following types of hydrologic basic data collected during the respective time intervals as shown below:

Surface Water Flows	October 1, 1963 - September 30, 1964
Diversion Data	October 1, 1963 - September 30, 1964
Climate Data	July 1, 1963 - June 30, 1964
Ground Water Level Measurements	July 1, 1963 - June 30, 1964
Surface Water Quality	October 1, 1963 - September 30, 1964
Ground Water Quality	October 1, 1963 - September 30, 1964

Location and General Features of the San Joaquin Valley

The San Joaquin Valley includes approximately the southern two-thirds of the Great Central Valley of California. It is a broad structural trough surrounded on three sides by mountains: the Sierra Nevada to the east, the Coast Range on the west, and the Tehachapi and San Emigdio Mountains on the south. It is separated from the Sacramento Valley on the north by the combined deltas of the Sacramento and San Joaquin Rivers. The Valley extends 250 miles southeasterly from Stockton to Grapevine at the foot of the Tehachapi Mountains; the width of the valley floor ranges from 25 miles near Bakersfield to 55 miles near Visalia and averages about 35 miles. The area of the valley floor is 10,000 square miles, excluding the rolling foothills that skirt the mountains.

East of the San Joaquin Valley the Sierra Nevada rises in a distance of 45 to 60 miles to altitudes of 14,000 feet or more; to the west the Coast Range rises to 6,000 feet; and on the south the Valley is enclosed by the San Emigdio and Tehachapi Mountains which rise to altitudes of about 8,000 feet. Only at the San Geronimo Strait, a break in the Coast Range east of San Francisco Bay, does the Great Central Valley open to the sea.

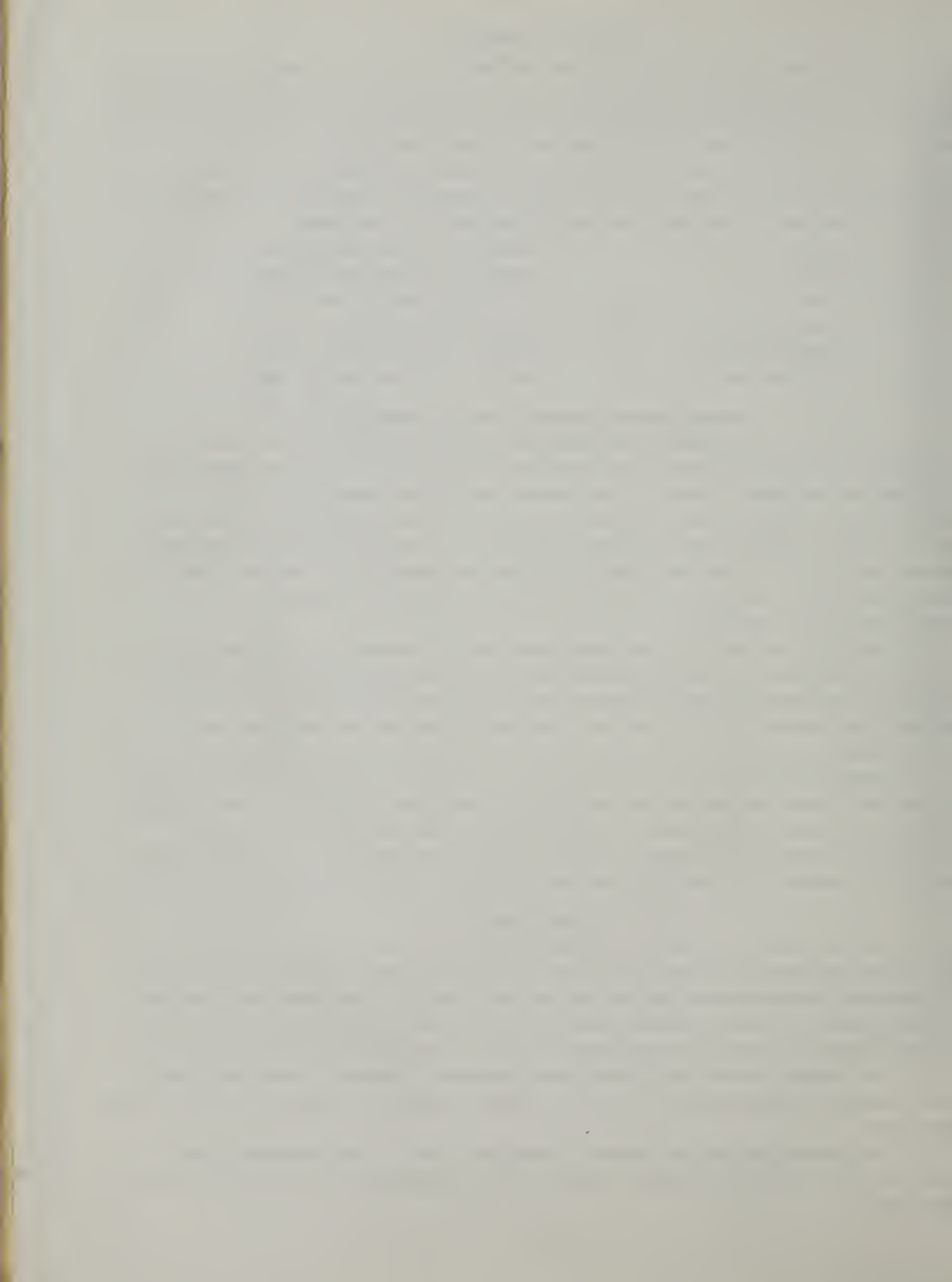
The valley floor rises gently from sea level at the north end to 500 feet above sea level about 100 miles south of Bakersfield; alluvial fans along the valley borders rise to altitudes as high as 700 to 1,000 feet. The gentle northward gradient of the valley floor is interrupted by a low divide in the neighborhood of the Kings River, about 15 miles west of Hanford; the San Joaquin Valley is divided at that point into two separate drainage basins -- the San Joaquin River Basin and the Tulare Basin.

Scope of Report

The areal scope of this volume of the report is depicted on Plates A-1, B-1, C-1, D-1, and E-1. The location of climatological stations for which data are presented is shown on Plate A-1 and the location of surface water gaging stations on Plate B-1. The districts or areas in the San Joaquin Valley for which ground water levels are reported are shown on Plate C-1. The locations of surface water sampling stations are shown on Plate D-1, and the ground water quality well locations are shown on Plates E-1 and E-2.

The following chapters present information on precipitation, evaporation, temperature, surface runoff, diversions, reservoir storage, imported water supplies, ground water conditions, and surface and ground water quality.

The tabulated basic data are presented in Appendixes A through E. These appendixes include all basic data collected pertaining to climate, surface water flow, ground water levels, and surface and ground water quality.



CHAPTER II. CLIMATE

Precipitation is the only significant source of water supply. All runoff and ground water sources derive their waters ultimately from meteorological sources. Planning for more intense development of our available water resources and operation of existing and planned facilities bring to sharp focus the continued need for collection and analysis of basic data pertaining to precipitation, temperatures, wind movement, and evaporation.

For many years it has been apparent that the official network of the U. S. Weather Bureau was not adequate to supply the Department's needs for climatological data required for water resources investigations. One of the primary objectives of this data program is to supplement the observation network of the U. S. Weather Bureau.

There are 16 cooperating agencies and 185 individual observers contributing data for the 407 stations reported.

Scope

The area covered by this report is shown on Plate A-1.

The Department of Water Resources gathers basic data relating to climatic phenomena in the San Joaquin Valley. This involves field measurements and office computations to determine the instantaneous, daily, monthly, seasonal, and annual temperatures, precipitation, and evaporation.

The field activities include the installation and maintenance of weather stations. The installed equipment obtains measurements of: (1) daily maximum and minimum temperatures; (2) precipitation--annual amounts from storage gages in remote areas, daily amounts from standard rain gages, and instantaneous amounts from recording rain gages; (3) evaporation in inches per day; and (4) wind movement in miles per day. In addition, similar data are obtained from many public and private agencies, and individuals.

The Department contributes to the cooperative program with the U. S. Weather Bureau by providing services for the installation, maintenance, and operation of approximately 100 stations in the State, eight of which are located in the San Joaquin Valley. The U. S. Weather Bureau reports these data in its publication, "Climatological Data".

The office activities consist of computation and compilation of approximately 150 monthly climatological station observations to provide a continuous and current record. This includes the computation of intensities from recording rain gages and preparation of hourly precipitation records for future use in development of rainfall intensity-duration-frequency relationships.

Precipitation

The San Joaquin Valley area may be divided into three general parts: the west side, the valley floor, and the east side or Sierra Nevada. Table 1, "Seasonal and Mean Precipitation at Selected Stations in the San Joaquin Valley", shows the distribution of rainfall west to east across the valley. Averages of precipitation normals show for the west side stations 6.3 inches, for the valley floor 9.7 inches, and for the east side 16.6 inches.

Precipitation during the 1963-64 season for the San Joaquin Valley area was below normal. The seasonal precipitation, expressed in percent of normal, for the three general areas is 68 percent on the west side, 72 percent on the valley floor, and 76 percent on the east side.

TABLE 1

SEASONAL AND MEAN PRECIPITATION AT
SELECTED STATIONS IN THE SAN JOAQUIN VALLEY

Alpha Order Number	Station	County	50-Year Mean 1910-1960 In inches	1963-64 Season In inches	Percent of Mean
B8 6675	Panoche	San Benito	7.51	4.72	63
C0 1867	Coalinga 1 SE	Fresno	6.80	4.79	70
C0 4536	Kettleman Sta.	Kings	6.21	4.51	73
C0 1244	Buttonwillow	Kern	5.38	2.90	54
C7 5338	Maricopa	Kern	5.54	4.41	80
B0 5297-01	Manteca No. 2	San Joaquin	11.65	8.22	71
B0 5738	Modesto	Stanislaus	11.56	7.74	67
B0 9073	Turlock	Stanislaus	11.71	8.20	70
B0 5532	Merced Fire Sta. 2	Merced	11.89	8.76	74
B0 5233	Madera	Madera	10.11	7.81	77
C0 3257	Fresno WB A. P.	Fresno	9.65	6.76	70
C0 9367	Visalia	Tulare	9.39	7.58	81
C0 3747	Hanford	Kings	8.10	5.01	62
C0 9452	Wasco	Kern	6.32	4.66	74
C0 0442	Bakersfield A. P.	Kern	6.19	4.60	74
B0 4590	Knights Ferry 2 SE	Stanislaus	17.42	14.14	81
B6 1588	Catheys Vly. Bull Run Rch.	Mariposa	19.72	14.51	74
B5 5346	Mariposa	Mariposa	28.94	20.95	72
B7 3261	Friant Gov't. Camp	Fresno	13.38	8.71	65
C2 6476	Orange Cove	Fresno	12.90	8.73	68
C2 4890	Lemon Cove	Tulare	13.68	11.89	87
C0 7077	Porterville	Tulare	10.39	9.73	94

The subnormal precipitation for the season was the result of a very dry period covering the months of December and February through June. January received about 70 percent of normal. Only three months out of the season's 12, September, October, and November, were on the wet side. Table 2, "Cumulative Monthly Precipitation at Key Stations in the San Joaquin Valley", shows the occurrences described above.

The San Joaquin Valley area normally receives 80 percent of the total seasonal precipitation by April 1. Also, by this date, maximum snowpack has been attained in the Sierras. On April 1, 1964, the valley floor had received rainfall in accumulated totals ranging from 70 percent of normal at Modesto on the north to 75 percent at Bakersfield on the south. Snowpack accumulation in the adjacent Sierras was only 70 percent of normal; however, the precipitation patterns of April, May, and June were far below normal, varying from 60 percent for the Kaweah River watershed to 77 percent for the Stanislaus River watershed.

TABLE 2

CUMULATIVE MONTHLY PRECIPITATION

AT KEY STATIONS IN THE SAN JOAQUIN VALLEY

1963-64

Month	MODESTO				MERCED FS #2				MADERA				FRESNO WB AIRPORT				VISALIA				BAKERSFIELD WB AIRPORT			
	50-Year		1963-64 Season		50-Year		1963-64 Season		50-Year		1963-64 Season		50-Year		1963-64 Season		50-Year		1963-64 Season		50-Year		1963-64 Season	
	Mean	In	percent	In	Mean	In	percent	In	Mean	In	percent	In	Mean	In	percent	In	Mean	In	percent	In	Mean	In	percent	In
	In inches	inches	of mean	of mean	In inches	inches	of mean	of mean	In inches	inches	of mean	of mean	In inches	inches	of mean	of mean	In inches	inches	of mean	of mean	In inches	inches	of mean	of mean
July	.01	.00	0	0	.01	.00	0	0	.01	.00	0	0	.01	.00	0	0	.00	.00	0	0	.02	.00	0	0
August	.03	.00	0	0	.02	.00	0	0	.02	.00	0	0	.02	.01	50	200	.01	.02	200	0	.03	.00	0	0
September	.19	.12	63	317	.12	.38	317	230	.10	.23	230	160	.10	.16	160	412	.08	.33	412	692	.12	.83	692	692
October	.68	1.82	268	308	.61	1.88	308	305	.55	1.68	305	179	.62	1.11	179	459	.49	2.25	459	371	.42	1.56	371	371
November	1.68	4.00	238	266	1.76	4.69	266	280	1.45	4.06	280	255	1.43	3.65	255	278	1.24	3.45	278	266	.94	2.50	266	266
December	3.95	4.09	104	128	3.79	4.86	128	135	3.18	4.30	135	127	3.08	3.92	127	129	2.81	3.63	129	138	1.87	2.58	138	138
January	6.21	5.90	95	92	6.24	5.77	92	95	5.18	4.91	95	91	5.01	4.58	91	91	4.78	4.36	91	96	2.98	2.85	96	96
February	8.17	5.95	73	71	8.35	5.93	71	70	7.04	4.92	70	69	6.64	4.58	69	69	6.57	4.53	69	81	4.01	3.26	81	81
March	10.11	7.03	70	74	10.34	7.68	74	73	8.80	6.42	73	70	8.34	5.85	70	70	8.18	5.69	70	75	5.10	3.83	75	75
April	11.02	7.29	66	71	11.37	8.08	71	73	9.70	7.12	73	69	9.22	6.35	69	80	9.00	7.21	80	76	5.79	4.39	76	76
May	11.46	7.40	65	71	11.81	8.35	71	75	10.04	7.54	75	70	9.54	6.70	70	81	9.33	7.58	81	75	6.11	4.59	75	75
June	11.56	7.74	67	74	11.89	8.76	74	77	10.11	7.81	77	70	9.65	6.76	70	81	9.39	7.58	81	74	6.19	4.60	74	74

Temperatures, Evaporation, and Wind Movement

The distribution of temperatures, evaporation, and wind movement is presented in Table 3, "Average Temperatures, Total Evaporation, and Average Wind Movement at Selected Stations in the San Joaquin Valley".

TABLE 3
AVERAGE TEMPERATURES, TOTAL EVAPORATION, AND
AVERAGE WIND MOVEMENT AT SELECTED STATIONS
IN THE SAN JOAQUIN VALLEY

Alpha Order Number	Station Name	Seasonal Ave. Temp. °F			Seasonal Evaporation Total Inches	Wind Movement Av. Mi./Mo.
		Max.	Min.	Mean		
C0 0332-02	Arvin-Frick	71.8	43.4	57.6	62.5	1879
C0 2013	Corcoran El Rico 1	74.2	45.8	60.0	79.5	1952
C6 2222-80	Cummings Valley	67.0	34.9	51.0	79.7	2627
B4 2473	Don Pedro Res.	72.6	43.8	58.2	73.9	M
C5 4303	Isabella Dam	72.8	44.8	58.8	80.5	1940
B0 5117	Los Banos Field Sta.	73.3	45.1	59.2	92.4	2953
C1 6895	Pine Flat Dam	75.2	45.4	60.3	65.8	785
B6 7273	Raymond 9N	81.0M	45.4M	63.2M	M	493M
C3 8620	Success Dam	74.4	49.3	61.9	82.5	1532
C7 8755	Taft KTKR	73.0	49.3	61.2	90.9	1084
C2 8868	Terminus Dam	73.2	49.8	61.5	81.2	1522
C0 9145	U.S. Cotton Field Sta.	74.3	48.4	61.4	79.5	1431
B0 9565	Westley	75.4M	44.6M	60.0M	M	M

M - All or part of record missing.

The variable flows of the streams entering the San Joaquin Valley on the east side result from the rainfall runoff occurring each winter and spring season, principally from December through April. The snowmelt runoff occurs during the spring and summer months from March through June. A combination of runoff from perennial tributaries and released stored water occurs during the summer and fall seasons. Flood flows in the valley floor channels are caused by runoff from rainfall and melting snow in the mountain areas in excess of mountain reservoir capacities, and by rainstorm runoff from the vast area of minor foothill watersheds and valley floor lands. In more recent years, flooding has become a lesser threat in the San Joaquin Valley as a result of additional reservoirs constructed on many of the tributary watersheds, including the Kern, Tule, Kaweah, Kings, San Joaquin, Merced, Tuolumne, and Stanislaus Rivers. With the completion of the Lower San Joaquin River Flood Control Project and eventual construction of additional dams and reservoirs, such as Buchanan on the Chowchilla River, Hidden on the Fresno River, and New Melones on the Stanislaus River, flooding will cease to be a problem in the San Joaquin Valley except in years of excessive precipitation.

Scope

The area covered by this report is shown on Plate B-1.

Records of mean daily flows and/or stage at 65 stream-gaging stations located on streams on the San Joaquin Valley floor and on streams entering the valley are presented in Appendix B of this report. Measurements of flows at points of diversion from major streams on the valley floor, diversions and acreage irrigated by east side irrigation districts, and deliveries from canals of the Central Valley Project are also included in Appendix B.

Hydrography

The Department of Water Resources' hydrographic activities in the San Joaquin Valley area are divided into two major categories -- field and office.

The field activities include:

1. Operation and maintenance of 35 stream-gaging stations.
2. Measurement of streamflows passing the gaging stations at stages varied enough to establish a stage-discharge relationship.
3. Measurement of the quantities of water diverted by major diverters from the San Joaquin, Merced, Tuolumne, Stanislaus, and Tule Rivers, and from Dry Creek near Modesto.
4. Construction of new installations as needed to augment the base network of gaging stations operated by the U. S. Geological Survey.
5. Cooperation with public and private agencies and with other branches within the department in the gathering of hydrographic data.

The office activities include:

1. Preparation of hydrographic data for computation by machine computation methods.
2. Manual computation and compilation of the discharge of stations not adaptable to machine computation.
3. Computation and compilation of quantities of water diverted for use in quantities per month for pumped diversions and quantities per day for gravity diversions.
4. Preparation of rating curves based on a series of discharge measurements on each stream.
5. Computation of rating formulas for the curves written in machine language for machine computation purposes.

Hydrographic Activities of Other Agencies

The U. S. Geological Survey maintains and operates about 180 streamflow gaging stations in addition to the stations operated by the Department in the San Joaquin Valley area. Of these, 57 are operated under the Federal-State Cooperative Surface Water Measurement Program. The records are published annually in a report by the U. S. Department of the Interior, Geological Survey, entitled "Surface Water Records of California, Volume 2, Northern Great Basin and Central Valley".

The U. S. Bureau of Reclamation maintains and operates seven streamflow gaging stations which monitor natural inflow to the southern San Joaquin Valley. These stations are in addition to the Bureau's operation stations on project canals. Data from both types of stations appear in an annual report published by the Bureau of Reclamation entitled "Fresno Field Division Water Supply".

The U. S. Corps of Engineers, the City and County of San Francisco, and other local agencies maintain and operate streamflow gaging stations within the San Joaquin Valley area. These data are published in this report. The specific degree of cooperation by these agencies with the Department of Water Resources is detailed in footnotes to tables contained in this report.

Runoff and Water Supply

The streams entering the Valley on the east side produce the major runoff to the Valley. Rainfall runoff occurs principally during the period December to April, while snowmelt is the source during the spring and summer seasons from March through June. During the summer and fall seasons, runoff is a combination of flows from perennial tributaries and releases from reservoir storage.

Runoff Comparisons

Runoff conditions from year to year for a particular stream are compared to the mean runoff for that stream over a long period of time. The mean runoff is a base or normal used to compare runoff with another year. Flow conditions on all major streams entering the Valley are affected by man-made impairments such as reservoirs and diversions; therefore, the runoff comparisons are made with computed natural runoff which allows for effects of impairments. These computed natural or unimpaired runoffs are considered to be the flows that would occur if no impairments were above the points of measurement. Runoff normals are computed for the 50-year period October 1910 through September 1960.

The water supply available during the 1964 season was below normal on all major tributaries, varying from 48 percent on the Tule River to 64 percent on the Tuolumne River.

The annual unimpaired runoff in percent of average for the 50-year normal for the period 1924 through 1964 on the major streams tributary to the San Joaquin Valley is shown in Table 4. The monthly unimpaired runoff for 1964 in percent of average based on the same 50-year period is shown for the same streams in Table 5.

TABLE 4
ANNUAL UNIMPAIRED RUNOFF
In percent of average ^(a)

Water Year	Stanislaus River below Melones P. H.	Tuolumne River near La Grange	Merced River at Exchequer	San Joaquin River below Friant	San Joaquin River near Vernalis (b)	Kings River Inflow to Pine Flat	Kaweah River near Three Rivers	Tule River Inflow to Success	Kern River Inflow to Isabella
Average Annual Runoff (a)	1090	1776	927	1670	5463	1570	385	127	617
1923-24	24	31	27	27	27	25	26		
1924-25	112	109	98	86	101	82	85		
1925-26	56	63	66	70	64	66	57		
1926-27	125	115	117	120	119	126	126		
1927-28	87	86	79	69	80	62	53		
1928-29	47	55	52	52	52	54	58		
1929-30	67	65	55	51	60	55	57		54
1930-31	29	34	28	29	30	30	30	19	30
1931-32	124	119	120	123	121	133	135	109	113
1932-33	56	63	56	67	60	75	74	63	69
1933-34	39	46	39	41	41	42	34	16	37
1934-35	111	119	126	115	118	103	93	70	74
1935-36	121	122	124	111	120	120	126	134	121
1936-37	102	113	131	132	120	149	176	241	180
1937-38	188	193	224	221	206	209	226	279	209
1938-39	48	55	51	55	52	62	64	65	73
1939-40	128	125	118	113	121	114	133	166	113
1940-41	123	141	157	159	145	162	167	186	202
1941-42	136	134	139	135	136	128	127	107	122
1942-43	144	134	139	123	135	129	174	287	163
1943-44	62	74	74	76	72	74	82	80	94
1944-45	117	118	118	128	120	131	143	160	131
1945-46	108	106	102	104	105	103	93	74	105
1946-47	58	62	61	67	62	71	69	41	69
1947-48	82	80	74	73	77	63	68	50	54
1948-49	68	70	69	70	69	61	57	38	48
1949-50	99	87	78	78	86	82	78	49	70
1950-51	155	140	132	111	134	102	109	122	86
1951-52	176	168	169	170	171	182	214	252	226
1952-53	89	86	68	73	79	74	80	78	88
1953-54	82	81	72	79	78	83	79	70	81
1954-55	62	64	58	70	64	71	72	51	58
1955-56	173	178	181	177	177	162	188	165	141
1956-57	82	80	70	79	78	79	77	51	71
1957-58	154	149	152	158	153	157	166	176	171
1958-59	54	56	49	57	54	51	40	25	44
1959-60	54	59	52	50	54	45	47	38	45
1960-61	37	41	34	39	38	36	30	15	28
1961-62	91	100	100	115	102	117	103	68	106
1962-63	116	116	106	117	114	119	130	94	120
1963-64	60	64	49	55	58	54	60	47	51

(a) Average unimpaired runoff in thousands of acre-feet computed from the 50-year period October 1910 through September 1960.

(b) Figures were computed from summations of unimpaired runoff at foothill stations on major tributaries only and do not include runoff from minor tributaries and from valley floor.

TABLE 5
MONTHLY UNIMPAIRED RUNOFF
In percent of average (a)

Month		Stanislaus River below Melones P. H.	Tuolumne River near La Grange	Merced River at Exchequer	San Joaquin River below Friant	San Joaquin River near Vernalis (b)	Kings River Inflow to Pine Flat	Kaweah River near Three Rivers	Tule River Inflow to Success	Kern River Inflow to Isabella
October	Percent ^c	74	130	88	135	116	136	144	275	172
	Average	8	15	7	19	49	19	4	1	14
November	Percent	228	292	225	237	253	222	191	130	134
	Average	22	37	17	27	102	25	8	4	18
December	Percent	66	70	55	68	66	75	67	48	89
	Average	44	73	38	53	209	45	16	8	23
January	Percent	64	62	41	48	55	45	41	33	70
	Average	59	98	54	65	276	56	19	12	25
February	Percent	36	40	24	33	34	32	32	18	50
	Average	82	135	78	91	386	77	27	18	30
March	Percent	39	40	30	38	38	38	40	28	46
	Average	120	179	99	135	533	112	39	26	47
April	Percent	64	60	51	52	57	59	62	60	44
	Average	202	284	148	241	875	215	63	24	89
May	Percent	61	72	57	60	64	61	67	62	39
	Average	296	447	244	428	1415	428	102	21	149
June	Percent	49	61	46	52	54	47	60	57	40
	Average	188	368	179	386	1121	384	75	9	125
July	Percent	56	35	26	38	38	32	45	38	36
	Average	52	113	50	160	375	148	23	2	59
August	Percent	107	52	50	64	65	48	57	60	52
	Average	12	19	10	45	85	42	6	0	24
September	Percent	108	53	14	55	58	47	84	157	59
	Average	5	8	4	19	37	18	3	0	14
1963-64 Water Year										
	Percent	60	64	49	55	58	54	60	47	51
	Average	1090	1776	927	1670	5463	1570	385	127	617

- (a) Average unimpaired runoff in thousands of acre-feet computed from the 50-year period October 1910 through September 1960.
(b) Figures were computed from summations of unimpaired runoff at foothill stations on major tributaries only and do not include runoff from minor tributaries and from the valley floor.
(c) Percent figures are preliminary values and subject to revisions.

Lakes and Reservoirs

There are 59 principal reservoirs in the State, of which 25 are located in the San Joaquin Valley area. These 25 have a total storage capacity of 4,727,530 acre-feet. The storage capacity, water in storage on October 1, 1963, and storage on October 1, 1964, in the major reservoirs in the San Joaquin Valley area are shown in Table 6. The quantity of water in storage in these 25 reservoirs at the end of the 1963-64 season was about 27 percent of the total storage capacity as compared to 49 percent at the end of the 1962-63 season.

TABLE 6

SUMMARY OF PRINCIPAL RESERVOIR STORAGE IN THE SAN JOAQUIN VALLEY

(In acre-feet)

Watershed	Reservoir	Total Capacity	In Storage Oct. 1, 1963	In Storage Oct. 1, 1964
<u>Stanislaus</u>	Relief	15,560	4,400	11,530
	Strawberry	18,270	10,480	9,190
	Melones	112,600	11,060	10,450
	Donnels	64,500	49,576	21,800
	Beardsley	97,500	83,296	77,313
	Tulloch	68,400	33,948	23,670
<u>Tuolumne</u>	Lake Eleanor	26,100	18,520	4,650
	Lake Lloyd	268,000	182,450	25,700
	Hetch Hetchy	360,400	289,461	230,490
	Don Pedro	290,000	174,920	111,040
	Turlock Lake	49,000	11,440	17,830
<u>Merced</u>	Lake McClure	289,000	63,750	0
<u>San Joaquin</u>	Crane Valley	45,400	24,800	24,200
	Lake Thomas A. Edison	125,000	101,360	50,100
	Florence Lake	64,600	31,020	237
	Mammoth Pool	122,700	17,490	27,010
	Huntington Lake	89,800	87,900	49,720
	Redinger Lake	35,000	8,600	9,840
	Shaver Lake	135,400	103,830	15,550
	Millerton Lake	520,500	205,000	172,400
<u>Kings</u>	Wishon	128,300	90,060	58,980
	Pine Flat	1,001,500	467,200	191,860
<u>Kaweah</u>	Terminus	150,000	8,460	7,500
<u>Tule</u>	Success	80,000	12,350	9,260
<u>Kern</u>	Isabella	570,000	217,030	96,970
TOTAL		4,727,530	2,308,401	1,257,290

Streamflow Measurements

Many of the stream-gaging stations, records of which are reported in Appendix B, are maintained and operated by agencies cooperating with the Department of Water Resources. The methods used by all cooperating parties are standardized and the results obtained are equally good.

During the 1964 season 35 of the total of 65 gaging stations on streams for which records are reported in Tables B-4 and B-5 were maintained, operated, and records compiled by the Department of Water Resources.

Recorders

An automatic water stage recorder is in operation at each gaging station in the San Joaquin Valley area. The continuous record of water surface elevation at each station serves two major purposes in the preparation of the data in this report, and assists in the planning of flood control projects. First, the water surface elevation (gage height) is a factor in determining the quantity of flow of the stream in

cubic feet per second passing a given station. Second, the actual surface elevation at two adjacent stations on a stream on the valley floor afford the means of obtaining the water surface elevation at pumping plants along the stream between the stations. This information assists in the determination of the pumping head in order that the rate of diversion by the pumping plants can be obtained.

Ratings

A streamflow rating is made for each stream gaging station. This rating gives the flow in cubic feet per second for each gage height at the station. Normally, the gage height-to-flow relation or stream-flow rating is more or less permanent where there is a fixed channel and a fixed flow regimen at the station. The rating varies, however, where the bed of the channel consists of loose, shifting sand; where heavy weed growth accumulates as the season progresses; or where there may be backwater effects due to ice or other downstream conditions. In the last two cases, more frequent measurements of flow are made to obtain accurate records of flows passing the station.

Use of Water for Irrigation

The prevailing warm temperatures and a prolonged frost-free period during the summer season in the San Joaquin Valley favors the profitable production of a wide variety of marketable crops.

The major irrigated crops in the San Joaquin Valley include rice, alfalfa, orchard fruits, nuts, grapes, cotton, corn, grain, flax, pasture grasses, and a large variety of truck crops.

Criteria

The number of diversion points measured on the major streams in the San Joaquin Valley may vary from year to year. The criteria for selecting points to be measured were established in 1960. At that time it was determined that by measuring only those diversion points which had an average of two hundred acre-feet per season based on the previous three years of diversion record, 50 percent of the field work could be eliminated and still 95 percent of the total water diverted could be measured.

Changes in crop pattern and the available water supply are major factors that influence the amounts of water diverted for irrigation purposes.

Irrigation Diversions

Measurements and records of diversions in 1964 included all the major points of diversion on the valley floor along the San Joaquin River and tributaries; along the Stanislaus, Tuolumne, and Merced Rivers, and Dry Creek tributary to Tuolumne River; and along the Tule River.

This report contains records for a total of 171 points of diversion. Table 7 shows, by streams, the number of points of diversion and the acre-feet diverted.

TABLE 7
SUMMARY OF DIVERSION POINTS AND TOTAL ACRE-FEET DIVERTED
Oct. 1, 1963-Sept. 30, 1964

Stream	Number Of Points Measured	Total Acre-feet Diverted
San Joaquin River		
Vernalis to Fremont Ford Bridge	40	208,700
Fremont Ford Bridge to Gravelly Ford (a)	18	969,846
Gravelly Ford to Friant Dam	24	11,230
Tuolumne River	22	22,640
Stanislaus River	23	58,220
Merced River	34	62,210
Dry Creek (Tributary to the Tuolumne River)	3	1,259
Tule River	7	31,070
TOTAL	171	1,365,175

(a) Records furnished by U. S. Bureau of Reclamation.

Waters diverted by Central Valley Project canals and east side irrigation districts are shown on Table B-7.

The monthly amount of water diverted at the individual points of diversion along all the streams covered in the San Joaquin Valley area together with the total acre-feet diverted for the season is shown in Appendix B, Table B-6 of this report. The monthly use in percentage of seasonal total is also shown. The location of each diversion point on a given stream is measured from the mouth of that stream progressing upward by river-mile. References to left or right bank assume an orientation facing downstream.

All of the diversions are accomplished by pumping except for 18 by gravity. The records of diversion by gravity are obtained by means of canal ratings established by flow measurements. The records of pumping diversions are obtained in a few instances by means of canal rating but generally are obtained by actual measurement of the pump discharge. Most of the pumps are electrically operated, making it possible to establish a relationship between water pumped and power input. Sufficient measurements are made to establish a rate of discharge for each pump, and the electric meters are read monthly to determine the power used.

The monthly amount of diversions in acre-feet by the large east side irrigation districts from the Stanislaus, Tuolumne, and Merced Rivers during the 1964 season is shown in Appendix B, Table B-7. The monthly amount of diversions in acre-feet by Central Valley Project canals is shown in Appendix B, Table B-9.

Fresno Slough and James Bypass normally convey excess flood flows from the Kings River into the San Joaquin River at a point above Mendota Dam, but during the irrigation season, San Joaquin River water is backed up through those channels by the Mendota Dam to afford irrigation supplies to the James and Tranquillity Irrigation Districts and to certain other diverters. The diversion data for these streams shown in Table B-6 were furnished by the U. S. Bureau of Reclamation.

Imported and Exported Water

Water is imported to the San Joaquin Valley from the Sacramento-San Joaquin Delta via the Delta-Mendota Canal. The amount of water diverted and its distribution for use are shown in Table B-9.

Water is exported from the San Joaquin Valley via the Hetch Hetchy Aqueduct from the Tuolumne River to the City and County of San Francisco. Table B-8 shows the amount of that export.

CHAPTER IV. GROUND WATER MEASUREMENTS

The ground water resources of California have long been recognized as one of the major natural resources of the State. The ever-increasing rate of draft on the ground water basins makes the problems associated with the use and conservation of this resource numerous and complex, and the solution more urgent.

More than one-quarter of all the ground water pumped for irrigation in the United States is used in the San Joaquin Valley. Widespread pumping began about 1900 and, especially since 1940, has increased at an accelerated rate. In response to this heavy withdrawal, ground water levels in extensive areas of the Valley have declined rapidly. The water level decline will continue as long as ground-water pumpage exceeds the natural and artificial recharge of the ground water basin.

Ground water occurs under confined and unconfined conditions in the San Joaquin Valley. In much of the western, central, and southeastern parts of the Valley, three distinct ground water reservoirs are present. In downward succession there are (1) a body of unconfined and semiconfined fresh water in alluvial deposits of Recent, Pleistocene, and possibly later Pliocene age overlying the Corcoran Clay Member of the Tulare Formation; (2) a body of fresh water confined beneath the Corcoran Clay Member which occurs in alluvial and lacustrine deposits of late Pliocene age or older; and (3) a body of saline connate water contained in marine sediments of middle Pliocene or older age which underlies the fresh-water body throughout the area. (U. S. Geological Survey Water-Supply Paper 1618 Abstract.)

In much of the eastern part of the Valley, especially in the area of the major streams, the Corcoran Clay Member is not present and ground water occurs as one fresh-water body to considerable depth. Ground water is replenished by infiltration of rainfall, by infiltration from streams, canals, and ditches, by underflow entering the Valley from tributary streams and from canyons, and by infiltration of excess irrigation waters.

The ground-water storage capacity of the San Joaquin Valley to a depth of 200 feet has been estimated to be approximately 93 million acre-feet, equal to roughly 9 times the capacity of the present and proposed surface-water reservoirs in the Valley.

All studies of ground-water problems and plans for solution of these problems have two factors in common: they must be founded upon records of water level measurements and quality analysis of water samples obtained over a period of years.

On the east side of the San Joaquin Valley from Chowchilla River to the southern end of the valley good records of ground water levels extending as far back as 1921 have been obtained through the combined efforts of the State, U. S. Bureau of Reclamation, and many local agencies. In 1930 the Department began collection of ground water level data in connection with special investigations of water resources of specific areas. From this beginning a program of annual, semiannual, and monthly measurements of ground water levels has developed in cooperation with federal and local agencies.

Scope

The area covered by this report is shown on Plates A-1 and B-1.

The areal scope of Appendix C of this volume is depicted on Plates C-1 through C-4. During the period July 1, 1963, to June 30, 1964, the San Joaquin District of the Department of Water Resources obtained approximately 13,000 water level measurements on some 7,500 wells. The period of record of these wells ranges from one to over 40 years.

Basic Data

Because significant trends in water level fluctuations can be indicated by a representative sample, a selection was made of approximately 600 wells for which the records are presented in Appendix C of this volume. These wells, designated as selected wells, were chosen on the basis of a number of factors such as

areal distribution; length of water level record; frequency of measurements; conformity with respect to water level fluctuation in the ground water area; and availability of a log, mineral analysis, and/or production record. Table C-1 presents the water level measurements made from July 1, 1963, through June 30, 1964. This volume continues the records for those wells published in Bulletin 77-62 which fall within the boundary of the San Joaquin Valley area.

Processed Data

Hydrographs depicting average water level fluctuations in 19 selected ground water areas are presented on Plate C-5. Individual well hydrographs depicting graphically the fluctuation of water levels are shown on Plate C-6. These wells distributed among significant areas were selected insofar as possible to be representative of their respective areas.

Ground water maps showing lines of equal elevation of water in wells for spring of 1964 appear on Plates C-7 and C-8. Where sufficient data are available, lines of equal elevation of water are shown for the unconfined or semiconfined aquifer, and the confined aquifer or pressure surface.

Maps showing the areas where the ground water level changed five feet or more in the unconfined, semiconfined, and confined aquifers are presented on Plates C-1 and C-2.

Related Information

For some basins or areas, maps showing depth to ground water are also prepared. At appropriate times, commonly every five years, maps are prepared showing lines of equal change occurring in the water level in wells during the time intervals. These maps are available in the office of the San Joaquin District of the Department of Water Resources and will be presented in future reports.

Cooperative Programs

Within the San Joaquin Valley area the Department of Water Resources has cooperative ground water programs with the U. S. Geological Survey, U. S. Bureau of Reclamation, Kern County, Kings County Water District, Poso Soil Conservation District, and the Los Banos Soil Conservation District.

Monthly Program

Approximately 350 selected wells are measured monthly and the resulting figures are published in a monthly summary report. These wells were selected as being representative of their respective areas. Most of the field work is done by cooperating agencies, while the Department measures 25 of the 350 selected wells. The Department compiles and publishes the collected field data in a monthly report. The water level measurements on the selected monthly wells are included in Appendix C of this volume.

Annual and Semiannual Programs

In Kern County approximately 1,000 wells are measured semiannually under a cooperative agreement between the U. S. Bureau of Reclamation, the County of Kern, and the Department of Water Resources. Approximately 500 additional water level measurements being made by the Kern County Land Company are made available to the Department.

Maps of Kern County showing lines of equal depth to water and lines of equal elevation of water in wells are prepared for both spring and fall of each year.

In the Kings County Water District approximately 325 selected wells are measured semiannually by that agency and submitted to the Department for use in preparation of ground water maps under a cooperative agreement. Ground water maps are prepared for both spring and fall showing lines of equal elevation of water in wells in the district.

In the Poso Soil Conservation District approximately 40 wells are measured by that agency and the results submitted to the Department. Ground water maps are prepared for the district showing depth to water in wells in January and July.

Ground Water Conditions

Data are presented in this report for two zones or aquifers in 13 of the 50 areas reported in Appendix C.

During the period July 1963 to June 1964, 34 areas in the San Joaquin Valley showed a rise in the unconfined and semiconfined aquifers. There was no change in one area, but in 9 other areas there was a decline. Five of the 15 areas for which the pressure surface is reported show a decline and 10 show a rise in the water level.

In the shallow zone the maximum declines occurred in the Tracy area and the Fresno Slough area, where changes of 6.2 feet and 4.8 feet respectively are noted. The greatest rise in the shallow zone was 17.3 feet in the Vandalia Irrigation District. The maximum decline of 2.4 feet occurred in the deep zone of the Kern River Delta area. The greatest rise in the deep zone was 16.4 feet in the Delano-Earlimart Irrigation District. In those areas for which water levels are based on a composite of shallow and deep zones, the main change was a rise of 4.6 feet in the Buena Vista Water Storage District.

Table 8 presents the average change in ground water levels, spring 1963 to spring 1964. The average change in water level for each district or area was determined where possible by planimetering ground water contour maps. In areas where insufficient data were available to define reliable contours, a numerical average was made from the actual well measurements.

TABLE 8
AVERAGE CHANGE IN GROUND WATER LEVELS
IN DISTRICTS OR AREAS IN THE SAN JOAQUIN VALLEY
Spring 1963 - Spring 1964

Ground Water Districts or Areas		Number of Wells Considered in Analysis	Change in Feet
Name	Number		
San Joaquin Valley	5-22.00		
Tracy Area	5-22.04	19	- 6.2
Oakdale Irrigation District	5-22.06	a/	+ 0.2
Modesto Irrigation District	5-22.07	a/	0.0
Turlock Irrigation District	5-22.08	a/	- 3.6
Merced Irrigation District	5-22.09	a/	+ 0.7
El Nido Irrigation District	5-22.10	a/	+ 4.7
Delta-Mendota Area	5-22.11	555	- 1.1
Chowchilla Water District	5-22.12	a/	+ 0.3
Madera Irrigation District	5-22.13	a/	+ 0.8
West Chowchilla-Madera Area	5-22.14	a/	- 2.9
Fresno Irrigation District	5-22.15	a/	+ 0.3
City of Fresno	5-22.16	a/	- 0.3
Fresno Slough Area	5-22.17	a/	- 4.8
Consolidated Irrigation District	5-22.18	a/	+ 2.9
Alta Irrigation District	5-22.19	a/	+ 3.4
Lower Kings River Area	5-22.20		
Shallow Zone		a/	+ 2.6
Deep Zone		a/	- 0.9
Orange Cove Irrigation District	5-22.21	a/	+ 1.5
Stone Corral Irrigation District	5-22.22	a/	+ 5.1
Ivanhoe Irrigation District	5-22.23	a/	+ 4.9
Kaweah-Delta Water Conservation District	5-22.24	a/	+ 6.2

TABLE 8 (Cont.)

AVERAGE CHANGE IN GROUND WATER LEVELS
IN DISTRICTS OR AREAS IN THE SAN JOAQUIN VALLEY
Spring 1963 - Spring 1964

Ground Water Districts or Areas		Number of Wells Considered in Analysis	Change in Feet
Name	Number		
San Joaquin Valley (Continued)			
Tulare Irrigation District	5-22.25	a/	+ 5.5
Exeter Irrigation District	5-22.26	a/	+11.9
Lindsay-Strathmore Irrigation District	5-22.27	21	+10.6
Lindmore Irrigation District	5-22.28	a/	+15.2
Porterville Irrigation District	5-22.29	a/	+ 8.9
Lower Tule River Irrigation District	5-22.30		
Shallow Zone		a/	+10.3
Deep Zone		a/	+14.6
Vandalia Irrigation District	5-22.31	6	+17.3
Saucelito Irrigation District	5-22.32		
Shallow Zone		a/	+ 3.7
Deep Zone		a/	+ 8.2
Pixley Irrigation District	5-22.33		
Shallow Zone		a/	+ 9.3
Deep Zone		a/	+10.5
Alpaugh-Allensworth Area	5-22.34		
Shallow Zone		a/	+ 7.3
Deep Zone		a/	- 0.8
Delano-Earlimart Irrigation District	5-22.35		
Shallow Zone		a/	+ 6.4
Deep Zone		a/	+16.4
Southern San Joaquin Municipal Utility District	5-22.36		
Shallow Zone		a/	+ 7.1
Deep Zone		a/	+11.9
North Kern Water Storage District	5-22.37		
Shallow Zone		a/	+11.6
Deep Zone		a/	+14.9
Shafter-Wasco Irrigation District	5-22.38		
Shallow Zone		3	- 1.7
Deep Zone		a/	+ 5.4
City of Bakersfield	5-22.39	26	- 5.2
Kern River Delta Area	5-22.40		
Shallow Zone		a/	+ 0.2
Deep Zone		a/	- 2.4
Edison-Maricopa Area	5-22.41		
Deep Zone		a/	- 1.6
Buena Vista Water Storage District	5-22.42	a/	+ 4.6
Semitropic Water Storage District	5-22.43		
Shallow Zone		a/	+10.5
Deep Zone		a/	+ 2.1

TABLE 8 (Cont.)

AVERAGE CHANGE IN GROUND WATER LEVELS
IN DISTRICTS OR AREAS IN THE SAN JOAQUIN VALLEY
Spring 1963 - Spring 1964

Ground Water Districts or Areas		Number of Wells Considered in Analysis	Change in Feet
Name	Number		
San Joaquin Valley (Continued)			
Avenal-McKittrick Area	5-22.44	33	+ 0.7
Tulare Lake-Lost Hills Area	5-22.45	12	+ 4.4
Corcoran Irrigation District	5-22.46		
Shallow Zone		<u>a/</u>	+ 7.7
Deep Zone		<u>a/</u>	+15.4
Mendota-Huron Area	5-22.47		
Deep Zone		<u>a/</u>	+ 6.0 ^{b/}
Poso Soil Conservation District	5-22.48	<u>a/</u>	- 2.6
San Luis Canal Company	5-22.49	<u>a/</u>	- 3.0
Terra Bella Irrigation District	5-22.50	4	+ 4.9
Centerville Bottoms Area	5-22.64	<u>a/</u>	+ 1.3
Garfield Water District	5-22.65	21	+12.8
Kings County Water District	5-22.66		
Shallow Zone		<u>a/</u>	+ 3.1
Deep Zone		<u>a/</u>	- 1.8
Pleasant Valley Area	5-22.69	23	- 4.2

a/ Average changes were determined by planimetering ground water contour maps.

b/ Average change determined from water level measurements made during December 1962 and December 1963.

Table 9 presents the change in average ground water levels from 1921 to 1951 and 1951 to 1964 in 19 ground water areas in the San Joaquin Valley.

TABLE 9

CHANGE IN AVERAGE GROUND WATER LEVEL FROM
1921 TO 1951 AND 1951 TO 1964
IN 19 GROUND WATER AREAS IN THE SAN JOAQUIN VALLEY

Name of Ground Water Area	Area in square miles	Irrigation and Other Water Districts Included in The Ground Water Area	Net change in water level 1921-51 ^{a/} in feet	Net change in water level 1951-64 ^{b/} in feet
Madera	342.6	Madera Irrigation District and Chowchilla Water District	- 24.1 ^{c/}	- 13.5
Fresno	404.0	Fresno Irrigation District and City of Fresno	- 22.4	- 16.0
Consolidated	243.0	Consolidated Irrigation District	- 19.0	- 6.6
Fresno, Consolidated, and Outside	700.1	Fresno Irrigation District, City of Fresno, and Consolidated Irrigation District	- 23.2	- 13.4
Outside Only	53.1	-----	- 25.6	- 29.7
Centerville Bottoms	18.1	-----	+ 1.0	+ 4.2
Alta	190.9	Alta Irrigation District	- 17.2 ^{c/}	+ 0.8
Ivanhoe	17.4	Ivanhoe Irrigation District	- 55.9	+ 13.3
Outside Ivanhoe	76.6	Stone Corral Irrigation District and a portion of Alta Irrigation District	- 28.5	- 0.5
Mill Creek	128.2	Portions of Kings County Water District and Kaweah Delta Water Conservation District	- 31.1	- 13.5

TABLE 9 (Cont.)

CHANGE IN AVERAGE GROUND WATER LEVEL FROM
1921 TO 1951 AND 1951 TO 1964
IN 19 GROUND WATER AREAS IN THE SAN JOAQUIN VALLEY

Name of Ground Water Area	Area in square miles	Irrigation and Other Water Districts Included in The Ground Water Area	Net change in water level 1921-51 ^a / in feet	Net change in water level 1951-64 ^b / in feet
Tulare	121.1	Tulare Irrigation District	- 59.1	- 1.8
Elk Bayou	67.6	Portion of Kaweah Delta Water Conservation District	- 47.8	- 7.2
Lindsay-Exeter	136.4	Exeter Irrigation District, Lindsay-Strathmore Irrigation District, and Lindmore Irrigation District	- 77.7	+ 59.4
Tule River	156.6	Porterville Irrigation District, portions of Lower Tule River Irrigation District, and Saucelito Irrigation District	- 62.5	+ 22.7
Lower Deer Creek	162.2	Portions of Lower Tule River Irrigation District, Saucelito Irrigation District, and Delano-Earlimart Irrigation District	-106.7	- 1.1 ^e + 1.5 ^f
Middle Deer Creek	54.6	Terra Bella Irrigation District	- 61.8	- 8.9 ^e - 36.7 ^f
Delano-Earlimart	140.0	Portions of Delano-Earlimart Irrigation District and Southern San Joaquin Municipal Utility District	-133.8	+ 8.4 ^e + 5.4 ^f
McFarland-Shafter	306.0	North Kern Water Storage District, Shafter-Wasco Irrigation District, and a portion of Southern San Joaquin Municipal Utility District	- 99.0	+ 16.2 ^e - 13.6 ^f
Rosedale	78.9	-----	- 36.3	- 58.4 ^g - 3.5 ^g
Arvin-Edison	205.2	Arvin-Edison Water Storage District	- 69.9 ^d	- 20.7 ^f

a/ 1951 was the first year of substantial deliveries from the Friant-Kern Canal.

b/ Fall 1951 to spring 1964.

c/ Fall 1929 to fall 1951.

d/ Fall 1941 to fall 1951.

e/ Unconfined aquifer, spring 1961 to spring 1964, only one aquifer reported prior to 1961.

f/ Pressure surface, spring 1961 to spring 1964, only one aquifer reported prior to 1961.

g/ Pressure surface, spring 1963 to spring 1964, only one aquifer reported prior to 1963.

CHAPTER V. SURFACE WATER QUALITY

The Department of Water Resources maintains a program of surveillance of the quality of water to detect any degradation of the surface waters of California due to contributions of wastes by agricultural, industrial, and municipal water users and to notify the proper control agencies of any such occurrences. The Surface Water Quality Monitoring Program was initiated to meet this surveillance need in April 1951 with the following objectives: (1) to determine the quality of the State's surface waters through a network of strategically located sampling stations representative of the major surface streams and lakes; (2) to detect changes in the quality of surface waters and notify control agencies of adverse changes; (3) to determine trends in surface water quality; and (4) to compile data into readily available form for distribution to cooperators and interested agencies.

Scope

The areal extent of activities discussed in this chapter and in Appendix D is shown on Plate D-1. Data on the quality of surface waters are presented in graphs and tables in Appendix D for the 1964 water year (October 1, 1963, to September 30, 1964). These data represent the observed physical, chemical, bacteriological, and radiological characteristics of water samples collected at the surface water quality stations shown on Plate D-1. The stations are listed alphabetically in Table D-1.

Sampling Program

The Department of Water Resources has 31 surface water quality monitoring stations in the San Joaquin Valley area. In November of 1963, two new stations were added to the area of the program monitoring the Tulare Lake Basin. Of the 31 stations, 21 are sampled monthly, 8 quarterly, and 2 semiannually. The variation in the sampling frequency is dependent upon past records, need, and the type of data required.

The Kern County Parks and Recreation Department, City and County of San Francisco (Oakdale office), and the U. S. Corps of Engineers collect samples at one, five, and nine stations, respectively. The U. S. Geological Survey, California Department of Public Health, Fresno County, Kern County, and Tulare County Health Laboratories perform the various analyses on the samples from the entire 31 sampling stations.

Station Sampling

Sampling at each station consists of obtaining water samples for partial mineral and bacteriological analyses and field measurement of pH, temperature, gage height, and dissolved oxygen. Samples collected in May and September were subject to: (1) complete mineral analysis, (2) bacteriological analysis, (3) radiological analysis, and (4) determination of concentrations of phosphate, arsenic, and detergents (alkyl benzene sulfonate-ABS). A sample is collected twice each year at ten selected stations for the determination of heavy metals by spectrographic analysis. The results of the spectrographic analyses are contained in Table D-3.

Conductivity Recorders

Conductivity recorders are maintained at selected surface water stations to obtain continuous records of the specific electrical conductance of the waters. The recorder charts are removed, edited, and processed at the end of each month. The data are converted and tabulated into mean hourly, daily, and weekly electrical conductivity values with the daily values being published monthly in an office report. A plot of the mean weekly values versus time for each of these stations is shown on Plate D-2.

Information from these recorders is used to approximate concentrations of several water quality parameters, including but not limited to concentrations of total dissolved solids (TDS), chlorides, and total hardness. These approximations are possible because of the relationship between specific conductance and each of the dissolved mineral constituents in the water.

Surface Water Quality Conditions

Surface water samples taken from the lower reaches of the San Joaquin River indicate an appreciable increase in mineral concentration as compared with results from the same stations for the 1963 water year.

The contribution of mineral constituents from major tributaries was also appreciably higher than it was the previous year. The increase in mineral concentration was most noticeable during the irrigation season when the streamflow regimen was at its lowest stage for the entire year. The incremental change in mineral constituents over the previous year's concentrations increased significantly from Fremont Ford to Vernalis. This accumulation of minerals is attributed to the lack of available streamflow sufficient in quantity to dilute accretions affluent to the lower reaches of the San Joaquin River.

The U. S. Bureau of Reclamation supplemented the flow in the San Joaquin River to aid the migration of fish from the Sacramento-San Joaquin Delta to the lower reaches of the San Joaquin River. Approximately 45,000 acre-feet were diverted from the Delta-Mendota Canal through the Newman and Westley Wasteways from September 23 to November 1, 1964, to provide adequate streamflow and dissolved oxygen content necessary for fish migration up the San Joaquin River.

CHAPTER VI. GROUND WATER QUALITY

Water development to meet the needs of California's phenomenal growth is one of the major problems facing the State. Although the use of ground water has been, and is, one of the major factors contributing to the economy of the State, insufficient data are available regarding the mineral quality of such ground water supplies. The present widespread dependence upon ground water requires constant vigilance, coupled with remedial action where necessary, to assure that the quality of ground water remains suitable for all intended uses. In view of this need for vigilance, a statewide program of observation and study of ground water quality was initiated by the Department of Water Resources in 1953.

Scope

Approximately 415 wells were sampled throughout the San Joaquin Valley, Panoche Valley, Tehachapi Valley, and Cummings Valley during this reporting period. The locations of monitored wells for 1963 are shown on Plate E-1, "Location of Selected Observation Wells, Ground Water Quality". A special program was conducted in the Fresno-Madera area during 1963 and 1964 by the Department in conjunction with the U. S. Geological Survey. The location of the wells used for this program are shown on Plate E-2.

Ground Water Quality Conditions

Adequate surveillance of the quality of a ground water basin requires the establishment of norms from which deviations can be determined. Considerable information has been gathered during the early years of this program and through other programs where ground water quality data were collected to assist in establishing the norms. Individual wells for the monitoring program were selected by an evaluation of well drillers' logs, water analyses, and water level data to best represent the quality of the ground water in the surrounding area. The number of wells needed for this purpose was mainly determined by the complexity of the ground water basin in a given area. The analyses of samples collected from selected wells in the San Joaquin Valley for the 1964 water year are contained in this bulletin. Included are tables of complete and partial mineral analyses and trace element determinations. The type of analysis made on a sample from a well is based mainly on the history of the data on that well.

With the increased use of fertilizers for agriculture and with the increase in the quantity of domestic waste water discharges, the possibility of an increase in nitrates in ground water is becoming more likely. Irrigation waters containing nitrate yielding fertilizers may percolate into the ground water bodies as evidenced by the study of well 18S/28E-10M1 (see Plate E-4). The discharge of domestic waste waters into the ground through leach fields or by disposal to ponds where percolation can occur is also another source of nitrates. Specific problems of this type have occurred in the Fresno-Clovis area (see Bulletin 143-3, Fresno-Clovis Metropolitan Area Water Quality Investigation). In light of this concern over the possibility of increases in nitrate concentrations in the Valley a special map was prepared. There were insufficient data in any one year to prepare such a map so it was necessary to use data collected during the period from 1961 through 1964 for Plate E-4, "Nitrate Concentrations in the San Joaquin Valley". It is intended that this plate will provide a base for identifying areas of high nitrates and for determining increases in future years.

Lithium, a relatively rare constituent of ground water, usually appears in very small quantities. In concentrations greater than 0.1 part per million, however, lithium has been found to be detrimental to citrus and other fruit trees in much the same manner as boron. Arsenic, although generally rare, also is found in some ground waters of the Valley and is significant even at 0.01 part per million.

Detergents (ABS: alkyl benzene sulfonate) do not occur in ground water naturally and therefore are an indicator of pollution. Selected nutrient determinations were also made in a few special cases in conjunction with the ABS determinations in the vicinity of sewage or industrial waste discharges.

Fresno-Madera Area Study

During 1963-64 a concentrated sampling program was carried out in the greater part of the valley floor of both Fresno and Madera Counties. This sampling was done in conjunction with the U. S. Geological

Survey's investigations in eastern Fresno County and in Madera County. This coordination eliminated duplication of effort and resulted in more and better coverage of the area. By utilizing the data collected during this period which was supplemented with older data, particularly in western Fresno County, a picture of the ground water quality for the Fresno-Madera area was developed. The ground water quality data for these areas are listed in Appendix E on Table E-2. The data were evaluated and illustrated on Plate E-3. This plate shows the mineral type of the ground water and contours of the electrical conductivity for each aquifer defined.

It should be noted that there is a difference between the water quality map on Plate E-3 and a similar plate published in Bulletin 130-63. First, the data are broken down by aquifer in this bulletin, whereas in 1963 sufficient data were not available to make this differentiation. Second, the difference indicated does not mean that the water quality picture was changed since 1963 but that with the greater quantity and quality of data now available more accurate maps could be prepared. It is possible that with more data and a better understanding of the geology and water quality the picture may be further refined. It is believed, however, that the present maps are very close to representing the actual ground water quality in the area. Areas were left blank when sufficient data were not available to make an evaluation. These areas will be studied in more detail in the future.

Kern County Piezometer Sampling Program

An ideal sampling network for an area would contain wells that are representative of single aquifers from which maps of the water quality for each aquifer could be made. It was believed that the U. S. Bureau of Reclamation's piezometer pipes best reflected this ideal network in Kern County. During 1964 a special sampling program was conducted in Kern County in order to sample the piezometers. Table E-5 lists some of the results of this study. The pumping times shown vary considerably and are based on the time required for the electrical conductivity (EC), which was measured continually, to settle down to a steady value. It was assumed that the erratic EC values first noted were indicative of the waters trapped in the pipe and gravel packing and that the water in the aquifer was indicated by the leveled off EC values. The pumping rates shown vary considerably and are thought to be generally indicative of the formation permeability. In a few cases the depth at which the piezometer was pumped would also reflect different rates.

Regular Sampling Program

Samples from the monitored areas are collected from early spring, when pumping begins, through the fall, when pumping generally slows down. Some of the samples collected are obtained by cooperating agencies, the remainder by the Department. Normally the cooperating agencies collect the majority of the samples, but for the 1964 water year most sampling was performed by department personnel due to a concentrated reevaluation in certain areas. At the conclusion of the reevaluation, it is intended that the cooperating agencies again continue with most of the sampling.

APPENDIX A
CLIMATE

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A-1	Location of Climatological Stations
A-2	Seasonal Precipitation, Distribution for 1963-64, in Percent of 50-year Mean

INTRODUCTION

This appendix presents the climatological data for the period July 1, 1963 to June 30, 1964. The data consist of precipitation station descriptions, monthly precipitation quantities, monthly temperature summaries and monthly evaporation totals.

Explanation of Tables

Precipitation Station Index

Table A-1 shows the precipitation station index. The climatological station designations used are based on the drainage basin and alpha number. Stations are also named, and latitude and longitude are shown to the nearest minute. The county, elevation above sea level, the year the record began, and the name of the current observer of record are also shown.

Each main drainage basin is assigned a letter and each subbasin a number as shown on Plate A-1 of this report.

The alpha order number is assigned each station to denote its order in alphabetical sequence for machine processing. The subnumbers are used to avoid duplication of the original four-digit system for machine processing. Only 21 columns are available for the station name making some abbreviations necessary.

Each station is generally named after and referenced to the nearest post office (Livingston 5W--a point 5 miles west of the post office in the town of Livingston), or named for a geographic location (Chiquito Creek). Occasionally the observer's name is incorporated in the station name (Hornitos Giles Ranch).

Monthly Precipitation

Table A-2 shows the monthly and seasonal total rainfall for some 395 weather stations within and near the San Joaquin Valley area. This table summarizes all of the available precipitation observations from July 1963 through June 1964. Daily records are available in department office files.

Monthly Temperatures

Table A-3 shows a temperature summary for a monthly period at 60 weather stations throughout the San Joaquin Valley area.

The individual observations were obtained using the observations, techniques, types of thermometers, and exposure conditions recommended by the U. S. Weather Bureau. The Fahrenheit scale is used in all references to temperature.

Terms used in connection with the temperature data are explained in the following:

<u>Term</u>	<u>Definition</u>	<u>Abbreviation</u>
Maximum	The highest temperature of record for the month.	Max.
Minimum	The lowest temperature of record for the month.	Min.
Average maximum	The arithmetic average of daily maximum temperatures for indicated period.	Avg. max.
Average minimum	The arithmetic average of daily minimum temperatures for indicated period.	Avg. min.
Average temperature	The average of the daily maximum and minimum for each day; the daily averages are averaged to make the monthly averages.	Avg.

Monthly Summary of Evaporation Station Data

Table A-4 shows the monthly net evaporation at 12 stations throughout the San Joaquin Valley area.

Observations of the amount of water evaporating from an open pan are made in the manner recommended by the U. S. Weather Bureau. The standard Weather Bureau pan is 47.5 inches in diameter and

10 inches deep. It contains clean water to a depth of seven to eight inches. The pan is placed on a lumber frame to insulate it from significant conductive heat exchange with the ground. The evaporation is measured by the actual difference in the pan water surface elevation over a 24-hour period with the appropriate adjustments for rainfall.

Terms used in connection with evaporation data are explained below:

<u>Term</u>	<u>Definition</u>	<u>Abbreviation</u>
Evaporation	The net amount of water evaporated from the pan for the period given.	Evap.
Precipitation	The total amount of rainfall in inches which occurred during the period.	Precip.
Wind	The total movement of air over the pan, in miles, for the period.	Wind
Average maximum	See explanation in temperature data table.	
Average minimum	See explanation in temperature data table.	

Reference Notes

A list of the reference notes used in the climatological portion of this report follows:

- CD Record published in "Climatological Data" by U. S. Weather Bureau.
- WB All or part of record published by U. S. Weather Bureau.
- HPD Record published in "Hourly Precipitation Data" by U. S. Weather Bureau.
- HPD CD Published in both "CD" and "HPD" from separate gages. Record from "CD" reproduced in this report.
- CD(P) Precipitation data published in "CD". Other data published by DWR.
- R CD Published in both "CD" and "HPD" from recording rain gage. Record from "CD" reproduced in this report.
- R Recording rain gage. Hourly precipitation distribution not necessarily available at DWR.
- (R) Hourly precipitation record also available for this station.
- S Storage gage. Data published in "Storage Gage Precipitation Data" by U. S. Weather Bureau.
- Ss Storage gage using standard rain gage. Data published by DWR.
- T Trace.
- AS After storm only. Small amounts may not be recorded.
- b Preliminary data--subject to revision.
- E Wholly or partially estimated.
- No record.
- M One or more days of record missing. If average value is entered, less than 10 days' record is missing.
- RB Beginning of record.
- RE End of record.
- * Amount included in following measurement; time distribution unknown.
- V Includes total for previous month.
- D Water equivalent of snowfall wholly or partly estimated using a ratio of 1 inch water equivalent to every 10 inches of new snowfall.
- SCE Data obtained from Southern California Edison Company.

Additional criteria are:

Dimensional units used in this report are: Temperature in degrees Fahrenheit, precipitation and evaporation in inches, and wind movement in miles (per month).

Evaporation, wind movement and temperature data in this report are not published by the U. S. Weather Bureau.

All temperature data represent air temperatures.

TABLE A-1
INDEX OF CLIMATOLOGICAL STATIONS FOR 1963-64
SAN JOAQUIN DISTRICT

Drainage Basin	Alpha Order Number	Station Name	County	Elev.	Lat.		Long.		Record Began	Observer
					Deg.	Min.	Deg.	Min.		
CO	0009	Academy	Fresno	545	36	53	119	32	1958	Edwin W. Simpson
B6	0049	Ahwahnee 2 NNW	Madera	2790	37	24	119	44	1959	Mrs. Eleanor P. Crooks
CO	0204	Angiola	WB Tulare	205	35	59	119	29	1899	Angiola Elev. & Whse.
C7	0215	Annette	Kern	2140	35	39	120	10	1951	Ernest Still
D6	0239	Apache Camp	WB Ventura	4965	34	52	119	20	1940	Kern Co. Road Camp
CO	0332	Arvin	Kern	445	35	12	118	49	1936	Kern Co. Fstry. & F.D.
CO	0332-02	Arvin Frick	Kern	437	35	14	118	52	1959	Dept. Water Resources
C2	0343	Ash Mountain	WB Tulare	1708	36	29	118	50	1925	U.S. Natl. Park Serv.
B0	0373-80	Atwater Craig	Merced	150	37	21	120	37	1961	H. J. Craig
C2	0374	Atwell	S Tulare	6400	36	28	118	40	1949	Corps of Engineers
B7	0379	Auberry	WB Fresno	2005	37	05	119	29	1915	Pete E. Dubose
CO	0396-02	Avenal Walden	Kings	810	36	00	120	08	1957	L. F. Walden
C7	0399	Avenal Orchard Ranch	Kings	712	35	48	120	05	1919	E. R. Orchard
C7	0399-01	Avenal 8 SW	Kings	1424	35	58	120	13	1957	J. A. Sagaser
C7	0399-02	Avenal 6 SSW	Kings	1565	35	56	120	10	1953	Leslie Sagaser
C2	0422	Badger	WB Tulare	3030	36	38	119	01	1940	Lucille E. Weddle
B5	0425	Badger Pass	S Mariposa	7300	37	40	119	40	1941	U.S. Natl. Park Serv.
B5	0430	Bagby	Mariposa	820	37	37	120	08	1958	Mr. Peron
CO	0440	Bakersfield 1 W	Kern	400	35	23	119	02	1913	Kern County Land Co.
CO	0442	Bakersfield WB Airport	WB Kern	495	35	25	119	03	1933	U.S. Weather Bureau
C1	0449	Balch Power House	WB Fresno	1720	36	55	119	05	1921	P. G. & E. Company
C6	0466	Ballinger	Ss Kern	4240	34	53	119	22	1961	B. J. Snedden
C1	0534	Barton Flat	S Fresno	3760	36	49	118	53	1961	Corps of Engineers
B5	0570	Bear Valley Trabucco	Mariposa	2000	37	34	120	07	1952	Harold Trabucco
B5	0570-80	Bear Valley	Mariposa	2060	37	34	120	07	1960	Corps of Engineers
B3	0573	Beardsley Dam	Tuolumne	3165	38	12	120	05	1958	Oakdale Irrig. Dist.
C2	0596	Beartrap Meadow	S Tulare	6800	36	41	118	52	1959	Corps of Engineers
B4	0617	Beehive Meadow	S Tuolumne	6500	38	00	119	47	1947	Hetch Hetchy Wtr. Sup.
CO	0631	Bellevue	Kern	369	35	20	119	07	1961	Kern County Land Co.
V2	0684	Benton Insp. Sta.	Mono	5460	37	50	118	29	1959	John M. Patterson
B0	0688-02	Berenda 2 N	Madera	270	37	04	120	08	1959	Closed Jan. 1, 1963.
B7	0755	Big Creek PH No. 1	Fresno	4928	37	12	119	14	1913	So. Calif. Edison Co.
B7	0755-01	Big Creek PH No. 2	Fresno	3000	37	12	119	18	1913	So. Calif. Edison Co.
B7	0755-02	Big Creek PH No. 3	Fresno	1400	37	09	119	23	1922	So. Calif. Edison Co.
B7	0755-05	Big Creek PH No. 8	Fresno	2260	37	12	119	20	1921	So. Calif. Edison Co.
V2	0767	Big Pine Creek	S Inyo	10060	37	08	118	29	1947	Dept. Water Resources
V2	0776	Big Pine PH No. 3	Inyo	4680	37	08	118	19	1925	LA Dept Water & Power
V2	0819	Bishop Creek Intake 2	WB Inyo	8154	37	15	118	35	--	Calif. Elec. Power Co.
C1	0821	Bishop Pass Snow Course	S Fresno	11040	37	06	118	34	1950	Corps of Engineers
V2	0824	Bishop Union Carbide	WB Inyo	9390	37	22	118	43	1957	Union Carbide Co.
C6	0825-01	Bitter Creek	Ss Kern	1250	35	00	119	20	1961	B. J. Snedden
CO	0875	Blackwells Corner	WB Kern	644	35	37	119	52	1944	Dean Sams
C1	0880-80	Blasingame	Fresno	1050	36	58	119	27	1961	Calif. Div. Forestry
C1	1069-01	Bretz Mill	Fresno	3250	37	02	119	14	1960	U.S. Forest Service
D1	1170	Buena Vista	WB San Benito	1640	36	46	121	11	1932	Mrs. Ora Lee Martin
CO	1174	Buena Vista Rch.	Kern	310	35	20	119	17	1914	Kern County Land Co.
CO	1175	Buena Vista Rch. M & L	Kern	286	35	12	119	18	1955	Miller & Lux, Inc.
CO	1180-80	Buena Vista Rch. M & L 2	Kern	290	35	14	119	18	1962	J. G. Boswell Co.
C6	1199-01	Burgess Corrals	Ss Kern	1600	34	58	119	19	1960	B. J. Snedden
CO	1244	Buttonwillow	WB Kern	268	35	24	119	28	1940	Buena Vista W. S. Dist.
B2	1277	Calaveras Big Trees	WB Calaveras	4696	38	17	120	19	1929	Calif. Div. Beaches & Pks
B3	1280	Calaveras Ranger Sta.	WB Calaveras	3343	38	12	120	22	1944	U.S. Forest Service
C3	1300	Calif. Hot Springs RS	WB Tulare	2950	35	53	118	41	1907	U.S. Forest Service
C3	1425	Camp Nelson	Tulare	4825	36	08	118	37	1959	John F. Lewis
CO	1479	Canfield Ranch	Kern	334	35	17	119	10	1952	Kern County Land Co.
V7	1488	Cantil	WB Kern	2010	35	18	117	58	1955	Postmaster
CO	1490	Cantua Ranch	Fresno	295	36	30	120	19	1955	Giffen Ranch
CO	1557	Caruthers 4 E	Fresno	265	36	33	119	46	1960	R. L. Kincade
B0	1580	Castle AFB	Merced	170	37	22	120	34	1951	U. S. Air Force
B8	1583	Castle Rock Rad. Lab.	San Joaquin	625	37	38	121	32	1956	Lawrence Rad. Lab.
B6	1588	Catheys Vly. Bull Run Rch.	WB Mariposa	1425	37	24	120	03	1940	Wm. H. Alison
B5	1588-01	Catheys Vly. Meyer Rch.	Mariposa	2250	37	29	120	04	1957	Horace Meyer
B5	1588-03	Catheys Vly. 3 NNW	Mariposa	1250	37	29	120	07	1957	William Pierce
B6	1590	Catheys Vly. Sawyer Rch.	Mariposa	1275	37	26	120	06	1957	W. H. Sawyer
B6	1591	Catheys Vly. Stonehouse	Mariposa	1210	37	25	120	05	1951	S. S. Spurgin

TABLE A-1 (Cont.)

INDEX OF CLIMATOLOGICAL STATIONS FOR 1963-64
SAN JOAQUIN DISTRICT

Drainage Basin	Alpha Order Number	Station Name	County	Elev.	Lat.		Long.		Record Began	Observer
					Deg	Min.	Deg	Min.		
B4	1697	Cherry Valley Dam	WB Tuolumne	4765	37	58	119	55	1955	Hetch Hetchy Wtr. Sup.
B7	1737	Chiquito Creek	S Madera	7290	37	30	119	23	1961	Dept. Water Resources
D3	1743	Cholame Hatch Ranch	WB San Luis Obpo.	1975	35	41	120	12	1925	Everett C. Hatch
C7	1743-02	Cholame Twisselman	San Luis Obpo.	1675	35	34	120	07	1951	H. A. Twisselman
Z2	1754	Chuchupate Ranger Sta.	WB Ventura	5260	34	48	119	01	1941	U.S. Forest Service
C0	1770-80	Citrus	Kern	660	35	02	118	58	1963	Kern County Land Co.
B7	1844	Clover Meadows GS	S Madera	7002	37	32	119	17	1945	Dept. Water Resources
C0	1864	Coalinga	WB Fresno	671	36	09	120	21	1942	Coalinga Fire Dept.
C7	1864-02	Coalinga Roberts Rch.	Fresno	1350	36	02	120	27	1953	R. J. Roberts
C0	1867	Coalinga 1 SE	WB Fresno	663	36	08	120	21	1911	Union Oil Company
C7	1869	Coalinga 14 WNW	WB Fresno	1640	36	14	120	34	1949	Mrs. Charles Howell
C0	1870-80	Coalinga CDF	Fresno	690	36	08	120	22	1961	Calif. Div. Forestry
C0	1871-80	Coalinga Feed Yards Inc.	Fresno	1000	36	13	120	21	1964	Dept. Water Resources
B6	1878	Coarsegold	Madera	2363	37	16	119	42	1952	Dorothy McAllister
C0	1885	Coit Ranch Hdq.	Fresno	278	36	42	120	28	1954	Coit Ranch
B4	1904	Cold Springs	Tuolumne	5680	38	10	120	03	1961	John D. Morrison
B3	2003	Copperopolis	Calaveras	1000	37	59	120	38	1954	Corps of Engineers
C0	2012	Corcoran Irrig. Dist.	WB Kings	200	36	06	119	34	1912	S. S. Whitehead
C0	2013	Corcoran El Rico 1	Kings	198	36	03	119	39	1958	J. G. Boswell Co.
C0	2013-05	Corcoran El Rico 33	Kings	190	35	58	119	42	1951	J. G. Boswell Co.
V2	2069	Cottonwood Creek	S Inyo	10600	36	29	118	11	1947	Dept. Water Resources
V2	2071	Cottonwood Gates	Inyo	3710	36	25	118	02		LA Dept. Water & Power
B5	2072	Coulterville FFS	Mariposa	1870	37	43	120	12	1959	Calif. Div. Forestry
B5	2072-05	Coulterville 5 E	Mariposa	3010	37	43	120	06	1959	Norman Jaenecke
C5	2114	Crabtree Meadow	S Tulare	10720	36	34	118	20	1950	Corps of Engineers
B7	2122	Crane Valley PH	Madera	3440	37	17	119	32	1903	P. G. & E. Company
V2	2181	Crowley Lake	Mono	6870	37	35	118	42	1920	LA Dept. Water & Power
C6	2222-80	Cummings Valley	Kern	3825	35	07	118	35	1961	Dept. Water Resources
D6	2236	Cuyama	WB Santa Barbara	2240	34	56	119	37	1944	John S. Rowell
D6	2248	Cuyama Ranch	WB San Luis Obpo.	2170	34	59	119	40	1948	Corps of Engineers
B6	2288	Daulton	Madera	410	37	07	119	59	1946	M. M. Greenman
C0	2346	Delano	WB Kern	323	35	47	119	15	1876	Delano Fire Dept.
B8	2369	Del Puerto Road Camp	WB Stanislaus	1125	37	25	121	23	1958	Stanislaus County
B0	2375	Delta Ranch	Merced	90	37	07	120	45	1948	Pasquale Bisignani
B0	2389	Denair	WB Stanislaus	124	37	32	120	48	1917	Closed Feb. 29, 1964.
B0	2389	Denair 3 NNE	WB Stanislaus	137	37	34	120	47	1964	Ken C. Bratten
C0	2408	Devils Den SLF	Kern	500	35	46	119	58	1959	South Lake Farms
C0	2436	DiGiorgio	Kern	483	35	15	118	51	1937	DiGiorgio Fruit Corp.
C0	2440-01	Dinuba Alta I.D.	Tulare	334	36	33	119	23	1944	Alta Irrig. Dist.
C7	2464	Domengine Ranch	Fresno	1000	36	20	120	22	1959	V. Ciesielski
C7	2464-01	Domengine Spring	Fresno	1700	36	20	120	24	1958	V. Ciesielski
B4	2473	Don Pedro Reservoir	Tuolumne	700	37	43	120	24	1940	Hetch Hetchy Wtr. Sup.
C5	2492	Doublebunk Meadow	S Tulare	6200	35	57	118	36	1955	Corps of Engineers
B5	2539	Dudleys	WB Mariposa	3000	37	45	120	06	1909	W. D. McLean
B4	2609	Early Intake PH	Tuolumne	2356	37	53	119	57	1925	Hetch Hetchy Wtr. Sup.
C1	2653	East Vidette Meadow	S Tulare	10400	36	44	118	23	1955	Corps of Engineers
C0	2752-80	Eighth Standard Ranch	Kern	338	35	06	119	02	1963	Kern County Land Co.
V0	2756	Ellery Lake	WB Mono	9600	37	56	119	14	1924	Calif. Elec. Power Co.
C7	2785	El Rancho Cantua	Fresno	1020	36	25	120	29	1938	Sta. discontinued 7/63.
B0	2820	El Solyo Rch.	Stanislaus	50	37	37	121	14	1953	John K. Ohm
B0	2860	Escalon Swanson	San Joaquin	125	37	47	121	00	1944	Clark Swanson
B0	2909	Eugene	Stanislaus	173	37	55	120	51	1923	Corps of Engineers
B5	2920	Exchequer Reservoir	WB Mariposa	484	37	35	120	16	1935	Merced Irrig. Dist.
C0	2922	Exeter Fauver Ranch	WB Tulare	439	36	21	119	04	1938	Charles O. Coulter
B0	2968	Fancher Ranch Camp 3	Merced	225	37	19	120	20	1959	Calif. Packing Corp.
C7	3005	Fellows	Kern	1340	35	11	119	33	1956	Kern Co. Fire Dept.
B0	3063	Firebaugh 9 W	Fresno	187	36	51	120	37	1934	Thomas & Thomas Ranch
C0	3083	Five Points 5 SSW	WB Fresno	285	36	21	120	09	1942	Raymond Thomas Ranch
C0	3084	Five Points Diener	Fresno	263	36	22	120	06	1933	Frank C. Diener
B7	3093	Florence Lake	WB Fresno	7344	37	16	118	58	1940	So. Calif. Edison Co.
C0	3257	Fresno WB Airport	WB Fresno	326	36	46	119	43	1899	U.S. Weather Bureau
C0	3258-80	Fresno Co. Westside FD	Fresno	600	36	08	120	16	1963	Dept. Water Resources
B7	3261	Friant Government Camp	WB Fresno	410	36	59	119	43	1896	U.S. Bur. Reclamation
V0	3369	Gem Lake	WB Mono	8970	37	45	119	08	1924	Calif. Elec. Power Co.
E5	3387	Gerber Ranch	WB Santa Clara	2140	37	22	121	29	1912	Mrs. Hilda Draghi

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Drainage Basin	Alpha Order Number	Station Name	County	Elev.	Lat.		Long.		Record Began	Observer
					Deg.	Min.	Deg.	Min.		
C2	3397	Giant Forest	WB Tulare	6412	36	34	118	46	1921	U.S. Natl. Park Serv.
D1	3422	Gilroy 14 ENE	WB Santa Clara	1350	37	06	121	20	1940	Seth E. Auser
C0	3428-01	Gin Yard	Kern	295	35	09	119	14	1960	Miller & Lux, Inc.
C4	3463	Glennville	WB Kern	3140	35	43	118	42	1951	Kern Co. Fstry. & F.D.
C4	3465	Glennville Fulton RS	WB Kern	3500	35	44	118	40	1940	U.S. Forest Service
C0	3512	Gosford Feed Mill	Kern	360	35	19	119	05	1953	Kern County Land Co.
B4	3529	Grace Meadow	S Tuolumne	8900	38	09	119	36	1947	Hetch Hetchy Wtr. Sup.
C1	3548	Granite Basin	S Fresno	10000	36	52	118	36	1949	Corps of Engineers
C1	3551	Grant Grove	WB Tulare	6580	36	44	118	58	1924	U.S. Natl. Park Serv.
B5	3612-03	Green Valley Ranch	Mariposa	3170	37	46	120	09	1957	Mrs. D. Davidson
B4	3669	Groveland 2	WB Tuolumne	2825	37	50	120	14	1940	Duane J. Cox
B4	3672	Groveland Ranger Sta.	WB Tuolumne	3135	37	49	120	06	1940	U.S. Forest Service
B0	3690-02	Gustine 5 SW	Merced	145	37	13	121	03	1927	W. P. Jorgensen
B0	3690-04	Gustine Snyder	Merced	150	37	12	121	03	1954	Harry M. Snyder
B0	3694	Gustine Avoset	Merced	98	37	15	121	00	1928	Foremost Co.
B0	3698-80	Gustine 7 SSW	Merced	156	37	10	121	02	1959	Mrs. George E. Butts
V7	3710	Haiwee	WB Inyo	3810	36	08	117	57	1923	LA Dept. Wtr. & Power
C0	3747	Hanford	WB Kings	242	36	20	119	40	1899	Calif. Div. Forestry
C1	3811-11	Haslett Basin	Fresno	2400	36	58	119	13	1960	U.S. Forest Service
D1	3925	Hernandez 2 NW	WB San Benito	2160	36	25	120	55	1940	Max D. Ley
D1	3928	Hernandez 7 SE	WB San Benito	2765	36	18	120	42	1940	Mrs. Clorene Akers
B4	3939	Hetch Hetchy	WB Tuolumne	3870	37	57	119	47	1910	Hetch Hetchy Wtr. Sup.
B6	3948	Hidden Valley	Mariposa	1880	37	26	119	56	1949	Howard Brady
B2	3952	Highland Lakes	S Alpine	8650	38	30	119	48	1960	Dept. Water Resources
B0	3981	Hilmar	Merced	90	37	25	120	51	1948	Hilmar Fire Dept.
C2	4012	Hockett Meadow	S Tulare	8500	36	22	118	39	1959	Corps of Engineers
C0	4061-01	Homeland Dist. Sec. 9	Kings	190	35	57	119	36	1952	J. G. Boswell Co.
C0	4061-02	Homeland Dist. Sec. 17	Kings	206	35	50	119	37	1952	J. G. Boswell Co.
C0	4061-03	Homeland Dist. Sec. 34	Kings	195	35	53	119	34	1951	J. G. Boswell Co.
B5	4101-80	Hornitos Bridge Cafe	Mariposa	825	37	30	120	14	1962	Closed July 1, 1964.
B5	4102-01	Hornitos Erickson Ranch	Mariposa	1150	37	30	120	09	1955	Louie Erickson
B5	4103	Hornitos Giles Ranch	Mariposa	1050	37	28	120	14	1939	Arthur Giles
B5	4104-80	Hornitos	Mariposa	850	37	30	120	14	1960	Corps of Engineers
C3	4120	Hossack (Radio)	S Tulare	7100	36	11	118	37	1959	Corps of Engineers
B4	4148	Huckleberry Lake	S Tuolumne	7800	38	06	119	45	1959	Hetch Hetchy Wtr. Sup.
B3	4170	Hunters Dam	WB Calaveras	3220	38	12	120	22	1950	P. G. & E. Company
B7	4176	Huntington Lake	WB Fresno	7020	37	14	119	13	1915	So. Calif. Edison Co.
B8	4204	Idria	WB San Benito	2650	36	25	120	40	1918	New Idria Mine & Chem.
V2	4232	Independence	WB Inyo	3950	36	48	118	12		LA Dept. Wtr. & Power
V2	4235	Independence Onion Vly.	WB Inyo	9175	36	46	118	20	1948	LA Dept. Wtr. & Power
B5	4246	Indian Gulch	Mariposa	1000	37	26	120	12	1952	Frank N. Solari
V7	4278	Inyokern	WB Kern	2440	35	39	117	49	1937	Kern County Fire Dept.
C5	4303	Isabella Dam	Kern	2660	35	39	118	29	1949	Corps of Engineers
B5	4369	Jerseydale GS	Mariposa	3605	37	33	119	50	1958	U.S. Forest Service
C5	4389	Johnsondale	WB Tulare	4680	35	58	118	32	1954	U.S. Forest Service
B7	4442	Kaiser Meadows	S Fresno	9110	37	18	119	06	1946	So. Calif. Edison Co.
C2	4452	Kaweah PH 3	Tulare	1370	36	29	118	50	1913	So. Calif. Edison Co.
C6	4463	Keene	Kern	2575	35	13	118	34	1948	Kern County Fire Dept.
B8	4508	Kerlinger	WB San Joaquin	172	37	41	121	26	1947	Pac. Coast Aggregates
C0	4510-02	Kerman 2 ESE	Fresno	225	36	43	120	01	1960	Dept. Water Resources
C5	4513	Kern Canyon	Tulare	700	35	26	118	48	1916	P. G. & E. Company
C5	4518	Kern River Intake No. 3	WB Tulare	3650	35	57	118	29	1952	Mrs. Lila Lofberg
C5	4519	Kern River Intake 3 SCE	Tulare	3642	35	57	118	29	1921	So. Calif. Edison Co.
C5	4520	Kern River PH No. 1	WB Kern	970	35	28	118	47	1904	So. Calif. Edison Co.
C5	4523	Kern River PH No. 3	WB Kern	2703	35	47	118	26	1946	So. Calif. Edison Co.
C5	4572-01	Kernville RS	Kern	2600	35	45	118	25	1953	Mrs. Velma Araujo
C0	4534	Kettleman City 1 SSW	WB Kings	310	36	00	119	58	1930	Standard Oil Co. Calif.
C0	4535	Kettleman Hills	Kings	1255	36	02	120	06	1931	Standard Oil Co. Calif.
C0	4536	Kettleman Station	WB Kings	508	36	04	120	05	1933	P. G. & E. Company
B0	4590	Knights Ferry 2 SE	WB Stanislaus	315	37	48	120	39	1905	Raymond Willms
B3	4664	Lake Alpine	S Alpine	7500	38	29	120	01	1948	Dept. Water Resources
B4	4679	Lake Eleanor	S Tuolumne	4662	37	58	119	53	1909	Hetch Hetchy Wtr. Sup.
V2	4705	Lake Sabrina	S Inyo	9065	37	13	118	37	1948	Calif. Elec. Power Co.
D3	4767	La Panza Ranch	WB San Luis Obpo.	1550	35	23	120	10	1948	Abe E. Zimmerman
C6	4863	Lebec	WB Kern	3585	34	50	118	52	1940	Kern County Fire Dept.

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Drainage Basin	Alpho Order Number	Station Name	County	Elev.	Lat.		Long.		Record Begon	Observer
					Oeg	Min.	Oeg	Min.		
B6	4883	Le Grand Preston Rch.	Mariposa	984	37	20	120	02	1950	See White Rock Preston
B0	4884	Le Grand	WB Merced	255	37	14	120	15	1899	Merced Co. Fire Dept.
B0	4884-05	Le Grand 6 N	Merced	280	37	19	120	15	1945	James Massengale (USCE)
C2	4890	Lemon Cove	WB Tulare	513	36	23	119	02	1899	Kaweah Lemon Company
B0	4953-02	Linden Fire Station	San Joaquin	90	38	01	121	05	1948	E. J. Murphy
C0	4957	Lindsay	WB Tulare	395	36	11	119	04	1913	Frank De Chaine
B0	4999-03	Livingston 5 W	Merced	112	37	22	120	48	1952	E & J Gallo Winery Rch.
B7	5040	Logan Meadow	S Madera	3400	37	20	119	19	1948	See Mammoth Pool
V2	5067	Lone Pine Cottonwood PH	WB Inyo	3790	36	27	118	03	1940	LA Dept. Wtr. & Power
B8	5074	Lone Tree Canyon	WB San Joaquin	420	37	37	121	23	1933	Edward C. Gerlach
B3	5078	Long Barn Exp. Station	WB Tuolumne	5200	38	11	120	01	1960	Closed February 1964.
C6	5098	Loraine	WB Kern	2720	35	18	118	26	1941	Charles W. Poole
V2	5111-09	LA Aqueduct Intake	Inyo	3841	36	58	118	12	1919	LA Dept. Wtr. & Power
B0	5116	Los Banos 5 S	Merced	175	36	59	120	51	1948	H. G. Fawcett
B0	5117	Los Banos Field Sta.	Merced	160	37	01	120	54	1956	U.S. Bur. Reclamation
B0	5118	Los Banos	WB Merced	125	37	03	120	51	1873	Roger C. Rice
B8	5119	Los Banos Arburua Ranch	WB Merced	860	36	53	120	56	1932	Arburua Ranch
C0	5151	Lost Hills	WB Kern	285	35	37	119	41	1912	Kern Co. Fstry & F.D.
C1	5155-51	Lower Big Creek	Fresno	1078	36	55	119	15	1960	U.S. Forest Service
B4	5160	Lower Kibbey Ridge	S Tuolumne	6500	38	01	119	53	1948	Hetch Hetchy Wtr. Sup.
B6	5202	Lushmeadows Ranch	Mariposa	3215	37	29	119	50	1959	F. L. Raby
B0	5233	Madera	WB Madera	268	36	58	120	04	1899	Calif. Div. Forestry
B0	5233-03	Madera I. D.	Madera	263	36	55	120	02	1964	Madera Irrig. Dist.
C0	5257	Magunden	Kern	440	35	22	118	55	1927	So. Calif. Edison Co.
V2	5284	Mammoth Pass	S Mono	9380	37	37	119	02	1947	LA Dept. Wtr. & Power
B7	5288	Mammoth Pool	S Madera	3390	37	21	119	19	1948	So. Calif. Edison Co.
B0	5297-01	Manteca No. 2	San Joaquin	46	37	48	121	12	1930	Spreckles Sugar Co.
B0	5297-02	Manteca SP	San Joaquin	42	37	48	121	13	1935	Southern Pacific Co.
C7	5338	Maricopa	WB Kern	685	35	05	119	23	1911	Signal Oil & Gas Co.
C7	5338-01	Maricopa FS	Kern	885	35	04	119	24	1958	Kern County Fire Dept.
B5	5346	Mariposa	WB Mariposa	2011	37	29	119	58	1909	Mrs. Gabrielle Wilson
B5	5346-01	Mariposa Reynolds	Mariposa	2000	37	29	119	58	1958	E. F. Reynolds
B6	5346-04	Mariposa 8 ESE	Mariposa	2780	37	27	119	50	1952	D. A. Boyce
B5	5348	Mariposa Circle 9 Rch.	Mariposa	3536	37	33	119	51	1957	Miss D. D. Sevedge
B5	5352	Mariposa RS	Mariposa	2100	37	30	119	59	1957	Calif. Div. Forestry
C7	5372-01	Martinez Spring	Fresno	1875	36	20	120	25	1959	V. Ciesielski
B4	5400	Mather	WB Tuolumne	4515	37	53	119	51	1930	City of San Francisco
B0	5408-80	Mattos Ranch	Merced	170	36	59	120	51	1961	Bobbie Mattos
B0	5418-80	Maze Bridge 2 S	Stanislaus	35	37	37	121	13	1958	Dept. Water Resources
B5	5460	McDiermid Sta.	Mariposa	2990	37	43	120	06	1959	Dale Goodner
C7	5480-01	McKittrick FS	Kern	1051	35	18	119	37	1956	Kern County Fire Dept.
B7	5496	Meadow Lake	WB Fresno	4480	37	05	119	26	1948	Radio Station KRFM
B3	5511	Melones Dam	Tuolumne	900	37	57	120	31	1955	Oakdale Irrig. Dist.
B0	5526	Mendota 1 NNW	Fresno	172	36	46	120	23	1941	Henry E. Schreiner
C0	5526-04	Mendota Murietta Ranch	Fresno	253	36	39	120	27	1958	Mrs. R. Truelove
B0	5528	Mendota Dam	WB Fresno	166	36	47	120	22	1873	Frank F. Moitoza
C0	5529	Mendota Halfway Pump	Fresno	444	36	28	120	23	1956	Tidewater Oil Co.
C0	5530	Mendota VDL Farms	Fresno	230	36	45	120	28	1948	Vista Del Llano Farms
B0	5532	Merced Fire Station 2	WB Merced	169	37	18	120	29	1872	City of Merced
B0	5532-01	Merced SP	Merced	170	37	18	120	29	1872	Southern Pacific Co.
B0	5532-03	Merced 5 SE	Merced	198	37	16	120	23	1959	Dept. Water Resources
B0	5534	Merced Fancher Ranch	Merced	212	37	18	120	21	1920	Calif. Packing Corp.
B0	5535	Merced 2	WB Merced	168	37	19	120	29	1938	Merced Irrig. Dist.
B8	5550	Mercey Hot Springs	WB Fresno	1165	36	42	120	52	1932	Horace C. Swatzel
C3	5669	Milo 5 NE	WB Tulare	3400	36	17	118	46	1957	Mrs. Ethel Walker
B7	5677-80	Minarets RS	Madera	5180	37	25	119	21	1962	U.S. Forest Service
C2	5680	Mineral King	S Tulare	7975	36	26	118	35	1956	Corps of Engineers
C2	5708	Miramonte Honor Camp	Fresno	3005	36	40	119	05	1957	Calif. Div. Forestry
C1	5723	Mitchell Meadow	S Fresno	9700	36	45	118	43	1957	Corps of Engineers
B4	5735	Moccasin	Tuolumne	950	37	49	120	18	1935	Hetch Hetchy Wtr. Sup.
B0	5738	Modesto	WB Stanislaus	91	37	39	121	00	1926	Modesto Irrig. Dist.
B0	5740	Modesto KTRB	Stanislaus	93	37	40	120	59	1959	Clifford Price
B0	5741	Modesto 2	WB Stanislaus	92	37	38	121	00	1942	City of Modesto
V8	5756	Mojave	WB Kern	2735	35	03	118	10	1947	Kern County Fire Dept.
V8	5758	Mojave 2 ESE	WB Kern	2680	35	02	118	09	1963	KDOL Radio Station

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Drainage Basin	Alpha Order Number	Station Name	County	Elev	Lat		Long.		Record Began	Observer
					Deg	Min.	Deg	Min.		
C5	5777	Monache Meadows	S Tulare	7900	36	13	118	10	1950	Corps of Engineers
CO	5822-80	Moody Ranch	Kern	405	35	06	118	58	1963	Kern County Land Co.
C3		Mountain Home 2	S Tulare	5360	36	14	118	43	1962	Corps of Engineers
C1	5893	Mountain Rest FFS	Fresno	4100	37	03	119	22	1960	U.S. Forest Service
V8	6122	Neenach	WB Los Angeles	2890	34	43	118	35	1931	LA Dept. Wtr. & Power
BO	6168	Newman 2 NW	WB Stanislaus	108	37	21	121	03	1899	Richard A. Smith
BO	6168-01	Newman 1 SE	Merced	80	37	18	121	00	1960	Dept. Water Resources
CO	6230-50	North Belridge	Kern	630	35	33	119	47	1953	Belridge Oil Co.
B7	6252	North Fork Ranger Sta.	WB Madera	2630	37	14	119	30	1904	U.S. Forest Service
BO	6303	Oakdale	Stanislaus	155	37	46	120	51	1880	A. L. Gilbert Co.
BO	6305	Oakdale Woodward Dam	WB Stanislaus	215	37	52	120	52	1918	S. San Joaquin I. D.
B6	6321-80	Oakhurst	Madera	2250	37	20	119	39	1961	Oakhurst School
CO	6393	Oilfields FFS	Fresno	950	36	15	120	19	1952	Gene Martin
C7	6395	Oilfields Joaquin Ridge	Ss Fresno	3620	36	18	120	24	1949	U.S. Weather Bureau
C5	6462	Onyx	Kern	2750	35	42	118	13	1962	Corps of Engineers
CO	6467	Orange Cove	WB Fresno	431	36	37	119	18	1931	Orange Cove Cit. Assn.
BO	6490	Orestimba	Stanislaus	110	37	22	121	04	1896	Central Calif. I. D.
B5	6552	Ostrander Lake	S Mariposa	8600	37	38	119	33	1947	U.S. Natl. Park Serv.
B8	6583	Pacheco Pass	WB Merced	880	37	04	121	11	1949	U.S. Bur. Reclamation
CO	6651	Paloma Ranch	Kern	290	35	11	119	11	1957	Miller & Lux, Inc.
B8	6675	Panoche	WB San Benito	1265	36	36	120	50	1922	Miss Lily Berg
B8	6676	Panoche 2 W	San Benito	1320	36	37	120	53	1957	Malcolm Strohn
BO	6677	Panoche Creek	WB Fresno	370	36	41	120	35	1963	Employee Enterpr. Inc.
BO	6679-05	Panoche Water Dist.	Fresno	183	36	53	120	44	1949	Panoche Water Dist.
B4	6688	Paradise Meadow	S Tuolumne	7700	38	03	119	40	1948	Hetch Hetchy Wtr. Sup.
D3	6703	Parkfield	WB Monterey	1482	35	53	120	26	1938	Herbert H. Durham
D3	6706	Parkfield 7 NNW	WB Monterey	3590	36	00	120	28	1948	Raulston P. Morrison
BO	6746-01	Patterson	Stanislaus	105	37	28	121	07	1912	Yancey Lumber Co.
C6	6754	Pattway	WB Kern	3868	34	56	119	23	1915	Hudson Ranch
C2	6767	Pear Lake	S Tulare	9700	36	36	118	40	1956	Corps of Engineers
B8	6847	Pfeiffer Ranch	Merced	1615	36	53	121	08	1954	Frances S. Pfeiffer
C1	6857	Piedra	WB Fresno	580	36	48	119	23	1917	Mrs. Ida H. Akers
B3	6893	Pinecrest Strawberry	Tuolumne	5700	38	12	119	59	1922	P. G. & E. Company
C1	6895	Pine Flat Dam	WB Fresno	610	36	49	119	20	1949	Corps of Engineers
C1	6902	Pinehurst	WB Fresno	4050	36	42	119	01	1954	U.S. Forest Service
B7	6959-80	Placer G. S.	Madera	3670	37	22	119	22	1962	U.S. Forest Service
CO	7055-80	Pond 1 N	Kern	268	35	44	119	19	1962	Dept. Water Resources
CO	7077	Porterville	WB Tulare	393	36	04	119	01	1893	John H. Daybell
CO	7079	Porterville 3 W	Tulare	413	36	05	119	04	1958	Porterville I. D.
C5	7093	Portuguese Meadow	S Tulare	7000	35	48	118	34	1953	Corps of Engineers
C4	7096	Posey 3 E	WB Tulare	4920	35	48	118	38	1954	Panorama Height Lodge
CO	7098-11	Poso Ranch	Kern	370	35	37	119	16	1913	Kern County Land Co.
BO	7099-11	Poso Canal Co. Hdq.	Fresno	125	36	59	120	30	--	Central Calif. I. D.
B4	7145	Priest	Tuolumne	2245	37	49	120	16	1928	Hetch Hetchy Wtr. Sup.
D2	7150	Priest Valley	WB Monterey	2300	36	11	120	42	1898	Nelson H. Palmer
C5	7179	Quaking Aspen	S Tulare	7200	36	07	118	32	1955	Corps of Engineers
C1	7259	Rattlesnake Creek	S Fresno	9900	36	59	118	43	1961	Corps of Engineers
B6	7270-01	Raymond 3 SSW	Madera	635	37	11	119	56	1940	Sam Wood
B6	7272-01	Raymond 10 N	Mariposa	1640	37	22	119	54	1957	Fred Bunning Jr.
B6	7273	Raymond 9 N	WB Mariposa	1210	37	21	119	53	1962	Richard W. Schall
B6	7276	Raymond 12 NNE	Mariposa	1600	37	23	119	50	1954	L. E. Schatz
CO	7288	Rector	Tulare	344	36	18	119	15	1888	So. Calif. Edison Co.
CO	7354-80	Reedley MVFD	Fresno	345	36	37	119	27	1962	Mid-Valley Fire Dist.
BO	7447-80	Ripon	San Joaquin	65	37	45	121	07	1963	Arthur N. Clemens
CO	7460	Riverdale	Fresno	220	36	26	119	52	1917	Mid-Valley Fire Dist.
V2	7510	Rock Creek	S Inyo	9700	37	27	118	44	1947	Dept. Water Resources
B6	7528	Rocky Village	Mariposa	570	37	22	120	10	1957	W. R. Down
CO	7555	Rosedale	Kern	380	35	26	119	08	1914	Kern County Land Co.
B7	7560	Rose Marie Meadow	S Fresno	10000	37	19	118	52	1953	So. Calif. Edison Co.
C5	7579	Round Meadow	S Tulare	9000	35	58	118	21	1947	Corps of Engineers
B4	7623	Saches Springs	S Tuolumne	7900	38	06	119	51	1948	Hetch Hetchy Wtr. Sup.
D1	7719	San Benito	WB San Benito	1355	36	31	121	05	1936	John M. Shields
Z2	7735	Sandberg WB	WB Los Angeles	4517	34	45	118	44	1933	U. S. Weather Bureau
CO	7753	San Emigdio Ranch	WB Kern	1450	35	00	119	12	1901	Kern County Land Co.
D1	7755	San Felipe Highway Sta.	WB Santa Clara	365	37	01	121	20	1943	Div. of Highways

TABLE A-1 (Cont.)
INDEX OF CLIMATOLOGICAL STATIONS FOR 1963-64
SAN JOAQUIN DISTRICT

Drainage Basin	Alpha Order Number	Station Name	County	Elev.	Lat.		Long.		Record Began	Observer
					Deg.	Min.	Deg.	Min.		
CO	7800-02	Sanger 1 NE	Fresno	375	36	44	119	33	1959	James S. Minter
CO	7800-03	Sanger RS	Fresno	375	36	44	119	33	1958	Calif. Div. Forestry
CO	7816	San Joaquin	Fresno	174	36	36	120	11	1919	James Irrig. Dist.
B7	7817	San Joaquin Exp. Range	WB Madera	1100	37	06	119	44	1934	U.S. Forest Service
CO	7819-80	San Joaquin MVFD	Fresno	174	36	36	120	11	1962	Mid-Valley Fire Dist.
BO	7836-01	San Juan Hdqrs. M & L	Merced	105	37	05	120	39	1947	Miller & Lux, Inc.
B8	7846	San Luis Dam	WB Merced	277	37	03	121	04	1963	U.S. Bur. Reclamation
BO	7855	San Luis Canal Co. Hdq.	Merced	106	37	03	120	40	1944	San Luis Canal Co.
CO	7987-80	Santiago Ranch M & L	Kern	437	35	06	119	13	1963	Mr. Leo Destranpe
D7	8259-02	Simmler R. W. Cooper	San Luis Obpo.	2040	35	24	120	06	1936	R. W. Cooper
D7	8259-04	Simmler Maint. Sta.	San Luis Obpo.	2030	35	21	119	59	1946	Div. of Highways
D2	8276	Slack Canyon	WB Monterey	1730	36	05	120	40	1955	Calif. Div. Forestry
C6	8304	Smith Flat	Ss Kern	3800	34	54	119	21	1960	B. J. Snedden
B5	8318	Snow Flat	S Mariposa	8700	37	50	119	30	1947	Dept. Water Resources
C1	8323-01	Soaproot Saddle	Fresno	3830	37	02	119	15	1960	U.S. Forest Service
D7	8326	Soda Lake	San Luis Obpo.	1960	35	15	119	55	1925	Dewey Werling
B4	8353	Sonora RS	WB Tuolumne	1749	37	59	120	23	1887	Calif. Div. Forestry
G9	8355	Sonora Junction	WB Mono	6886	38	21	119	27	1959	Div. of Highways
CO	8375-50	South Belridge	Kern	575	35	27	119	43	1938	Belridge Oil Co.
BO	8378	South Dos Palos	Merced	116	36	58	120	39	1938	Southern Pacific Co.
B5	8380	So. Entrance Yosemite NP	WB Mariposa	5120	37	30	119	38	1941	U.S. Natl. Park Serv.
V2	8406	South Lake	S Inyo	9580	37	11	118	34	1948	Calif. Elec. Power Co.
CO	8407-11	South Lake Farms Hdq.	Kings	190	35	56	119	39	1959	South Lake Farms
B3	8450	Spring Gap Forebay	Tuolumne	4900	38	10	120	06	1921	P. G. & E. Company
C3	8455	Springville 7 ENE	WB Tulare	2470	36	10	118	42	1953	Elmer A. Sutton
C3	8460	Springville RS	WB Tulare	1050	36	08	118	48	1924	U.S. Forest Service
C3	8463	Springville Tule Hdws.	WB Tulare	4070	36	12	118	39	1907	P. G. & E. Company
C2	8474-80	Squaw Valley Fr.	Fresno	1750	36	45	119	13	1961	Edgar Young
B3	8499	Stanislaus Power House	WB Tuolumne	1130	38	08	120	22	--	P. G. & E. Company
C1	8510	State Lakes	S Fresno	10300	36	56	118	35	1955	Corps of Engineers
CO	8520	Stevenson Dist. Sec. 33	Tulare	212	36	03	119	30	1951	J. G. Boswell Co.
C3	8620	Success Dam	Tulare	590	36	03	118	55	1959	Corps of Engineers
C1	8643	Summit Meadow	S Fresno	6240	37	05	119	13	1960	Dept. Water Resources
C7	8752	Taft	WB Kern	1025	35	09	119	28	1940	Kern Co. Fstry. & F.D.
C7	8755	Taft KTKR Radio	Kern	1030	35	09	119	28	1954	G. K. Mann
C6	8826	Tehachapi	WB Kern	3975	35	08	118	27	1876	Mrs. Anita Cowan
C6	8832	Tehachapi RS	WB Kern	3975	35	08	118	27	1940	Kern County Fire Dept.
CO	8839	Tejon Rancho	WB Kern	1425	35	02	118	45	1895	Tejon Ranch Company
C2	8868	Terminus Dam	Tulare	570	36	25	119	00	1959	Corps of Engineers
C7	8893-80	Thirty-Two Corral	Fresno	1700	36	19	120	22	1959	V. Ciesielski
C2	8912	Three Rivers 6 SE	WB Tulare	2200	36	22	118	51	1940	Glenn Baker
C2	8914	Three Rivers Edison PH 2	WB Tulare	950	36	28	118	53	1909	So. Calif. Edison Co.
C2	8917	Three Rivers Edison PH 1	WB Tulare	1140	36	28	118	52	1940	So. Calif. Edison Co.
BO	8997	Tracy 2 SSE	WB San Joaquin	105	37	43	121	25	1951	Aage R. Tugel
B8	8999	Tracy Carbona	WB San Joaquin	140	37	42	121	25	1934	Banta Carbona Irr. Co.
CO	9006	Tranquillity Glotz	Fresno	165	36	38	120	14	1953	Ted Gromala
CO	9011-80	Traver 4 ESE	Tulare	285	36	26	119	24	1962	Dept. Water Resources
C1	9025	Trimmer RS	Fresno	736	36	54	119	17	1948	U.S. Forest Service
CO	9051	Tulare	Tulare	293	36	13	119	20	1919	So. Calif. Edison Co.
CO	9051-04	Tulare Dist. Sec. 27	Kings	179	36	05	119	48	1953	J. G. Boswell Co.
CO	9052	Tulefield	WB Kern	295	35	09	119	01	1948	Kern County Land Co.
C3	9059	Tule River Intake	Tulare	2450	36	10	118	42	1910	So. Calif. Edison Co.
C3	9060	Tule River PH	Tulare	1240	36	08	118	47	1910	So. Calif. Edison Co.
C5	9061	Tunnel RS	S Tulare	8950	36	22	118	17	1945	Dept. Water Resources
B3	9062	Tullock Dam	Calaveras	515	37	53	120	36	1958	Oakdale Irrig. Dist.
B4	9063	Tuolumne Meadows	S Tuolumne	8600	37	53	119	20	1947	Dept. Water Resources
BO	9073	Turlock	WB Stanislaus	115	37	29	120	51	1893	Carl A. Pearson
BO	9073-01	Turlock 5 SW	Stanislaus	76	37	28	120	55	1958	Chatom Co. Ltd.
BO	9073-02	Turlock 8 WSW	Stanislaus	60	37	27	120	58	1958	Herbert Ellis
CO	9145	U. S. Cotton Field Sta.	Kern	367	35	32	119	17	1922	U.S. Dept. Agriculture
B7	9162-80	Upper Chiquito	Madera	6800	37	30	119	24	1962	U.S. Forest Service
D1	9189	Upper Tres Pinos	WB San Benito	2050	36	38	121	02	1940	Eldon Fancher
B7	9301	Vermilion Valley	S Fresno	7520	37	22	118	59	1947	So. Calif. Edison Co.
CO	9304	Vestal	Tulare	500	35	50	119	05	1920	So. Calif. Edison Co.
CO	9367	Visalia	WB Tulare	354	36	20	119	18	1903	Tulare Co. C. of C.

TABLE A-1 (Cont.)

INDEX OF CLIMATOLOGICAL STATIONS FOR 1963-64
SAN JOAQUIN DISTRICT

Drainage Basin	Alpha Order Number	Station Name	County	Elev.	Lat.		Long.		Record Began	Observer
					Deg.	Min.	Deg.	Min.		
C0	9369	Visalia 4 E	Tulare	357	36	20	119	13	1959	J. V. Pimentel
C0	9452	Wasco	WB Kern	333	35	36	119	20	1899	Kern Co. Fstry. & F.D.
B5	9482	Wawona RS	WB Mariposa	3965	37	32	119	40	1934	U.S. Natl. Park Serv.
C5	9512	Weldon 1 WSW	WB Kern	2680	35	40	118	18	1940	Vernon J. Blount
C0	9535	West Camp SLF	Kings	290	35	51	119	53	1959	South Lake Farms
B6	9556-80	Westfall RS	Madera	4793	37	27	119	39	1958	U.S. Forest Service
C0	9560	Westhaven	WB Fresno	285	36	13	119	59	1925	Boston Ranch Co.
B0	9565	Westley	Stanislaus	85	37	33	121	12	1928	W. Stanislaus I. D.
C5	9602	Wet Meadow	S Tulare	8950	36	21	118	34	1959	Corps of Engineers
C0	9614-81	Wheeler Ridge LWU A-122	Kern	1230	34	59	118	57	1963	Dept. Water Resources
B6	9640-80	White Rock Preston	Mariposa	984	37	20	120	02	1950	Ray Preston
C0	9670-80	Wilbur Ditch	Kings	210	35	56	119	45	1962	South Lake Farms
C1	9749	Wishon Res.	Fresno	6600	37	01	118	58	1958	P. G. & E. Co.
C5	9754	Wofford Heights	WB Kern	2700	35	43	118	27	1894	James H. Jorgensen
C1	9773	Woodchuck Meadow	S Fresno	9200	37	02	118	54	1955	Corps of Engineers
C4	9805	Woody	Kern	1630	35	42	118	51	1956	Kern Co. Fstry. & F.D.
B5	9855	Yosemite National Park	WB Mariposa	3985	37	45	119	35	1904	U.S. Natl. Park Serv.

WB - All or part of data published by U. S. Weather Bureau.

S - Storage gage - Data published by U. S. Weather Bureau.

Ss - Storage gage using standard rain gage.

Note - Data collected from all other stations by Department of Water Resources.

TABLE A-2
PRECIPITATION DATA FOR 1963-64
SAN JOAQUIN DISTRICT

Drainage Basin	Alpha Order Number	Station Name	Seasonal Total	In inches											
				July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
CO 0009	Academy		10.53	.00	.02	.20	1.62	3.43	.87	1.15	.00	1.98	.81	.45	.00
B6 0049	Ahwahnee 2 NNW		19.89	.00	.02	.44	1.47	7.41	.53	3.03	.00	3.33	1.64	1.48	.54
CO 0204	Angiola	CD	5.94	.00	.05	.55	1.10	1.19	.23	.66	.06	1.21	.77	.12	T
C7 0215	Annette		5.99	.00	.00	.42	1.34	1.08	.00	1.59	.00	.90	.20	.46	.00
D6 0239	Apache Camp	HPD	9.78	.00	.00	1.55	1.39	2.75	.16	1.24	.56	1.31	.43	.39	.00
CO 0332	Arvin		6.34	.00	T	.99	.65	1.65	.08	.51	.42	.69	.63	.71	.01
CO 0332-02	Arvin Prick		6.30	.00	.02	1.20	.76	1.51	.15	.49	.44	.52	.69	.50	.02
C2 0343	Ash Mountain	CD	17.76	.00	.13	.62	1.45	5.06	.55	1.81	.31	3.61	2.49	1.50	.23
B0 0373-80	Atwater Craig		8.76	.00	.00	.21	1.57	2.59	.28	1.31	.21	1.22	.56	.34	.47
C2 0374	Atwell	S	30.00					July 26, 1963 to July 27, 1964							
B7 0379	Auberry	CO	18.10	.00	.11	.36	1.90	6.11	.46	2.32	T	3.45	1.73	1.32	.34
B7 0381	Auberry Valley		-	.00	RE										
CO 0396-02	Avenal Walden		4.02	.00	T	.26	1.01	.94	.05	.92	T	.33	.47	.04	T
C7 0399	Avenal Orchard Rch.		5.92	.00	.20	.40	.80	1.42	.04	1.40	.08	.92	.56	.10	.00
C7 0399-01	Avenal 8 SW		7.55	.00	.41	.15	1.11	2.01	.16	2.03	T	1.07	.39	.22	T
C7 0399-02	Avenal 6 SSW		6.71	.00	.25	.30	1.00	1.58	.13	1.62	.14	.85	.80	.04	.00
C2 0422	Badger	HPD	-	.00	.00	-	-	4.99	.67	2.44	.49	5.32	1.70	1.73	.07
B5 0425	Badger Pass	S	24.25					April 28, 1963 to April 12, 1964							
B5 0430	Bagby		16.21M				RB	5.24	.56	4.23	.18	2.84	1.40	1.43	.33
CO 0440	Bakersfield 1 W		5.31	.00	.00	.80	.75	1.08	.04	.49	.32	.45	1.21	.17	.00
CO 0442	Bakersfield WB Airport	R CD	4.60	.00	T	.83	.73	.94	.08	.27	.41	.57	.56	.20	.01
C1 0449	Balch Power House	HPD CD	21.40	.00	.02	.56	1.59	6.51	.69	2.61	.05	3.87	2.29	2.80	.41
C6 0466	Ballinger	Ss	9.00												
C1 0534	Sarton Flat	S	16.48					July 22, 1963 to August 10, 1964							
B5 0570	Bear Valley Trabucco		19.27	.00	.00	.27	1.60	5.84	.47	4.40	.15	2.77	1.59	1.86	.32
B5 0570-80	Bear Valley	(R)	17.86	.00	.00	.16	1.40	5.49	.36	4.08	.09	3.18	1.18	1.57	.35
B3 0573	Beardsley Dam		27.40	.00	.44	.59	2.63	7.81	.81	5.84	.21	2.98	2.01	2.44	1.64
C2 0586	Beartrap Meadow	S	33.24					July 22, 1963 to June 25, 1964							
B4 0617	Beehive Meadow	S	38.68					September 12, 1963 to September 15, 1964							
CO 0631	Belleuve		5.06	.00	.00	.60	.65	1.55	.09	.22	.20	.50	.97	.28	.00
V2 0684	Benton Insp. Sta.		4.60	.00	.66	.68	.22	.37	.07	.58	T	.07	.86	1.06	.03
B0 0688-02	Berends 2 N		-	.00	.00	.17	1.40	3.02	.49	RE					
B7 0755	Big Creek PH No. 1	b	24.25	.00	.09	.49	1.48	8.17	.46	2.55	.15	3.66	2.65	3.62	.93
B7 0755-01	Big Creek PH No. 2	b	21.14	.00	.02	.63	1.57	7.63	.42	2.23	.03	3.14	1.66	3.15	.66
B7 0755-02	Big Creek PH No. 3	b	21.10	.00	.13	1.22	1.89	7.01	.60	2.95	.05	3.49	1.55	1.75	.46
B7 0755-05	Big Creek PH No. 8	b	19.29	.00	.04	.83	1.33	6.68	.44	2.39	T	3.24	1.36	2.49	.49
V2 0767	Big Pine Creek	S	12.10					October 23, 1963 to October 19, 1964							
V2 0776	Big Pine PH No. 3	S	3.46	.00	.40	.47	.00	.30	.04	.80	.11	.40	.76	.00	
V2 0819	Bishop Creek Intake 2 (R)	CD	7.44	.00	.80	.78	.81	1.10	.20	1.00	.30	.65	.70	1.00	.10
C1 0821	Bishop Pass Snow Course	S	17.42					October 1, 1963 to August 25, 1964 (Discontinued)							
V2 0824	Bishop Union Carbide	CO	6.58E	.00	.22	1.34	.72	1.28	.05	.24	.05	.69	.52	1.34	.13E
C6 0825-01	Sitter Creek	Ss	2.11E												
CO 0875	Blackwell Corner	CD	3.89	.00	.12	.32	.88	.81	.03	.62	.05	.13	.54	.39	.00
C1 0880-80	Blasingame		14.18	.00	.03	.38	1.52	4.51	.59	1.83	T	3.79	.48	.98	.07
C1 1069-01	Bretz Mill		24.14	.00	.00	.68	1.57	10.36	.53	2.30	.00	3.45	2.35	2.68	.22
D1 1170	Buena Vista	HPD	-	.00	.00	-	1.52	-	.53	2.38	.31	2.74	-	.54	.49
CD 1174	Buena Vista Rch.		4.36	.00	T	.56	.78	1.03	.13	.31	.07	.82	.43	.23	.00
CD 1175	Buena Vista Rch. M & L		3.98	.00	.00	.76	.94	.98	.00	.35	.04	.61	.08	.22	.00
CO 1180-80	Buena Vista Rch. H & L 2		4.92	.00	.00	1.12	1.10	1.03	.00	.40	.05	.79	.04	.39	.00
C6 1199-01	Burgess Corrales	Ss	-	.00E	.00E	1.02	1.80	2.89	.16	.82	-	.46	-	.00E	.00E
CD 1244	Buttontwillow	CD	2.90	.00	T	.31	.95	.52	.04	.36	.04	.33	.25	.10	.00
B2 1277	Calaveras Big Trees	CD	45.01	.00	.00	.50	3.87	13.39	1.15	9.12	.63	7.10	2.93	3.99	2.33
B3 1280	Calaveras Ranger Sta.	HPD	36.06	.00	.00	.36	2.99	11.29	.73	7.51	.48	6.41	1.36	3.65	1.28
C3 1300	Calif. Hot Springs RS	HPD	19.64	.00	.42	.47	2.12	4.30	.92	1.96	.79	*	V6.44	2.02	.20
C3 1425	Camp Nelson		-	.00	.64	1.29	1.76	5.49	2.77	-	1.30	4.37	1.86	2.07	.40
CO 1479	Canfield Ranch		4.56	.00	T	.68	.80	1.30	.04	.22	.18	.66	.49	.19	.00
V7 1488	Cantil	CO	3.86	.00	.29	1.77	.82	.61	.10	.13	.00	.10	.00	.04	.00
CO 1490	Cantua Ranch		6.77	.00	.00	.00	1.99	1.70	.00	1.10	.00	1.43	.50	.00	.05
CO 1557	Caruthers 4 E		6.80	.00	.09	.24	1.02	1.92	.16	.61	T	1.48	.42	.82	.04
BD 1580	Castle AFB		7.78	.00	.00	.26	1.47	2.42	.10	1.00	.07	1.57	.28	.20	.41
B8 1583	Castle Rock Rad. Lab.	(R)	7.68	.00	.00	.13	.98	1.86	.15	2.60	.04	.79	.25	.32	.56
B6 1588	Catheys Vly. Bull Run Rch.	CD	14.51	.00	.00	.19	1.50	4.45	.28	2.34	.13	2.81	1.23	1.23	.35
B5 1588-03	Catheys Vly. 3 NNW		14.45	.00	.00	.00	1.10	5.78	.00	2.50	.00	2.22	1.30	1.55	.00
B6 1590	Catheys Vly. Sawyer Rch.		15.16	.00	.00	.15	1.37	4.70	.40	3.02	.06	2.57	1.22	1.32	.35
B6 1591	Catheys Vly. Stonehouse		14.17	T	.00	.20	1.50	4.29	.36	1.82	.07	2.91	1.22	1.34	.46
B4 1697	Cherry Valley Oam	CD	34.95	.00	.00	.80	2.30	10.12	.78	7.77	.16	5.36	2.56	2.95	2.15
B7 1737	Chiquito Creek	S	32.51					July 16, 1963 to July 13, 1964							
D3 1743	Cholame Hatch Rch.	HPD	6.07	.00	.06	.66	1.12	.97	.00	1.48	.06	1.00	.32	.40	.00
C7 1743-02	Cholame Twisselman		6.53	.00	.00	.41	1.34	1.11	.00	1.61	.07	1.18	.28	.53	.00
Z2 1754	Chuchupate RS	HPD	-	.00	.06	1.46	2.47	-	.05	1.26	.46	*	V2.96	.72	.00
CO 1770-80	Citrus		6.16	.00	T	1.09	.87	1.27	.04	.52	.10	1.18	.72	.37	.00
B7 1844	Clover Meadows GS	S	31.72					July 16, 1963 to July 13, 1964							
CO 1864	Coalinga	CO	5.10	.00	.01	.17	.93	1.41	.09	1.46	.01	.93	.02	.07	T
C7 1864-02	Coalinga Roberts Rch.		8.96	.00	.00	.00	1.42	3.17	.13	2.62	.00	.90	.72	.00	.00
CD 1867	Coalinga 1 SE	HPD	4.79	.00	.00	.11	.94	1.63	.06	1.25	.00	.77	.00	.03	.00
C7 1869	Coalinga 14 WNW	CD	9.50	.00	.11	.17	1.39	3.23	.10	2.62	T	1.36	.33	.19	.00
CO 1870-80	Coalinga CDF		4.54	.00	T	.12	.71	1.66	.00	1.34	.00	.63	.03	.03	.02
CO 1871-80	Coalinga Feed Yards Inc.		-									RB	.30	.00	.00
B6 1878	Coarsegold		20.10	.00	.03	.43	2.16	6.76	.34	2.99	.00	3.46	2.03	1.46	.44
CO 1885	Coit Ranch Hdq.		5.08	.00	.00	.11	.92	1.51	.24	.43	.10	.97	.48	.21	.11
B4 1904	Cold Springs		-	.00	.30	.68	2.88	-	-	-	-	-	-	-	-
B3 2003	Copperopolis	(R)	19.29E	.00E	.00E	.23	2.30	6.15	.20	3.45	.41	2.69	1.09	1.77	1.00
CO 20															

TABLE A-2 (Cont.)
PRECIPITATION DATA FOR 1963-64
SAN JOAQUIN DISTRICT

Drainage Basin	Alpha Order Number	Station Name	Seasonal Total	In inches											
				July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
BD 2389		Denair 3 NNE	CO 7.08												
CD 2408		Oeylvs Den SLF	4.59	.00	.08	.27	1.01	1.03	T	.89	RB	1.33	.47	.63	.45
CD 2436		DiGiorgio	6.42	.00	T	1.17	.20	1.45	.05	.50	.10	.30	.91	T	.00
CD 2440-01		Dinuba Alta I. D.	7.79	.00	.02	.26	1.43	2.04	.24	1.30	.10	.58	1.24	.51	.03
C7 2464		Domengine Ranch	6.56	.00	.24	.12	.80	2.28	.11	1.14	T	1.56	.23	.05	.03
C7 2464-01		Domengine Spring	7.90E	.00E	.00E	.00E	1.17	2.63	.15	1.60	.30	2.05	.00E	.00E	.00E
B4 2473		Don Pedro Reservoir	16.73	.00	.00	.25	1.72	4.98	.63	2.80	.35	3.19	.78	1.53	.50
C5 2492		Doublebunk Meadow	S 31.03					July 10	1963 to June 23, 1964						
B5 2539		Dudleys	CD 26.06	.00	T	.35	1.98	9.07	.65	5.12	.11	4.50	1.49	1.84	.95
B4 2609		Early Intake PH	26.09	.00	.00	.35	1.85	7.22	.72	4.71	.09	4.30	2.30	2.85	1.70
C1 2653		East Vidette Headow	S 15.16					August 24, 1963 to August 28, 1964							
CD 2752-80		Eighth Standard Ranch	5.51	.00	.00	.99	.80	1.24	.03	.39	.10	1.03	.63	.30	.00
VO 2756		Ellery Lake	CD 18.89	.00	.60	1.10	1.45	5.04	.70	2.90	.18	2.85	1.41	1.61	1.05
BO 2820		El Solyo Rch.	6.18	.00	.00	.13	1.24	1.40	.05	1.95	.01	.84	.15	.41	.00
BO 2860		Escalon Swanson	10.00	.00	.00	.22	1.82	3.27	.13	1.86	.02	1.41	.40	.31	.56
BO 2909		Eugene	(R) 10.43	.00	.00	.10	1.84	3.51	.13	1.60	.07	1.21	.81	.74	.42
B5 2920		Exchequer Reservoir	CD 14.07	.00	.00	.14	1.59	3.70	.31	2.76	.17	2.65	1.18	1.40	.17
CD 2922		Exeter Fauver Ranch	HPD -	.00	.09	.29	1.68	1.85	.18	-	.35	2.30	.92	.97	.05
BO 2968		Fancher Rch. Camp 3	9.18	.00	.00	.26	1.58	2.66	.19	1.09	.22	1.45	.93	.30	.50
C7 3005		Fellows	4.61	.00	T	.50	.82	1.53	.00	.81	.04	.53	.20	.18	.00
BO 3063		Firebaugh 9 W	-	-	-	-	-	-	-	.53	.00	1.00	.29	.19	.15
CD 3083		Five Points 5 SW	CD -	.00	.00	.07	.84	1.64	.09	.84	.00	1.22	T	.03	T
CD 3084		Five Points Diener	3.76	.00	T	.05	.53	1.22	.11	.68	.00	1.16	.01	T	T
B7 3093		Florence Lake	HPD 19.14	.00	.84	.79	1.58	5.52	.53	2.53	.25	3.11	2.38	1.38	.23
CD 3257		Fresno WBAP	(R) CD 6.76	.00	.01	.15	.95	2.54	.27	.66	T	1.27	.50	.35	.06
CD 3258-80		Fresno Co. Westside FD	-	-	RB	.07	.99	1.77	.04	1.14	.08	1.00	.14	.01	.01
B7 3261		Friant Government Camp	CD 8.71	.00	.00	.33	1.42	2.99	.35	.92	.08	1.34	.80	.48	.00
VO 3369		Gem Lake	CD 16.04	.00	.34	1.58	.75	3.52	.50	2.58	.30	1.95	1.89	1.63	1.00
E5 3387		Gerber Ranch	CD 11.54	.00	.01	.24	.85	3.68	.25	4.36	.12	1.18	.25	.24	.36
C2 3397		Giant Forest	HPD 30.63	.00	.32	1.26	1.31	6.89	.67	4.56	.53	6.89	4.47	2.67	1.06
D1 3422		Gilroy 14 ENE	CD 12.71	.00	.00	.25	1.17	4.57	.11	3.85	.07	1.56	.47	.34	.32
CD 3428-01		Grain Yard	4.17	.00	.00	.66	.88	1.42	.00	.43	.03	.46	.05	.24	.00
C1 3463		Glennville	CD 18.57	.00	.44	1.54	2.26	3.93	.56	1.92	.63	3.45	1.95	1.89	T
C4 3465		Glennville Fulton RS	HPD -	.00	.31	-	1.70	4.04	.55	1.51	.61	3.85	1.61	1.97	.10
CD 3512		Gosford Feed Mill	-	.00	T	.62	RE	-	-	-	-	-	-	-	-
B4 3529		Grace Headow	S 34.27					September 16, 1963 to September 17, 1964							
C1 3548		Granite Basin	S 28.64					August 21, 1963 to August 11, 1964							
C1 3551		Grant Grove	HPD CD 31.16	.00	.25	1.78	2.41	8.76	1.28	4.33	.28	7.19	2.73	3.40	.75
B5 3612-03		Green Valley Rch.	HPD 31.32	.00	T	.45	2.38	10.40	.70	5.46	.02	6.15	2.06	2.55	1.15
B4 3669		Groveland 2	HPD 23.67	.00	.00	.39	1.74	8.58	.64	3.71	.09	3.86	1.39	2.64	.63
B4 3672		Groveland Ranger Sta.	CD 26.62	.00	.00	.37	1.86	8.53	.75	6.63	.08	3.64	2.06	1.91	.79
BO 3690-02		Gustine 5 SW	7.40	.00	.00	.26	1.31	2.12	.02	1.54	.04	1.11	.51	.01	.48
BO 3690-04		Gustine Snyder	7.18	.00	.00	.24	1.21	2.20	.05	1.65	.00	.92	.36	.00	.55
BO 3694		Gustine Avoset	5.88	.00	.00	.10	1.07	1.72	.03	1.34	.00	1.04	.02	.18	.38
BO 3698-80		Gustine 7 SW	6.16	T	.00	.11	1.29	1.82	.02	1.29	T	.90	.13	.03	.57
V7 3710		Haiwee	CD 5.02	.00	1.42	1.37	1.12	.51	.01	.20	T	.08	.08	.23	.00
CO 3747		Hanford	CD 5.01	.00	.00	.33	.75	1.23	.29	.61	.02	.94	.64	.20	.00
C1 3811-11		Haslett Basin	18.23	.00	.00	1.04	1.63	6.36	.50	1.72	.00	2.86	1.80	2.07	.25
D1 3925		Hernandez 2 NW	CD 10.42	.00	.02	.24	1.26	3.75	.21	2.27	.06	1.81	.24	.43	.18
D1 3928		Hernandez 7 SE	HPD 13.13	.00	.10	.91	1.21	4.67	.20	2.94	.03	2.25	.22	.51	.09
B4 3939		Hetch Hetchy	HPD CD 24.23	.00	.11	.64	2.23	7.09	.68	3.38	.10	3.73	2.19	2.65	1.43
B6 3948		Hidden Valley	CD 23.24	.00	T	.31	1.98	8.33	1.10	4.03	.22	3.99	1.47	1.24	.57
B3 3952		Highland Lakes	S 28.80					July 23, 1963 to July 10, 1964							
BD 3981		Hilmar	CD 6.42	.00	.00	.14	1.42	1.64	.30	1.76	.11	.78	.27	.00	.00
C2 4012		Hockett Meadow	S 26.56					August 27, 1963 to July 21, 1964							
CD 4061-01		Homeland Dist. Sec. 9	6.02	.00	.00	.44	1.25	1.34	.21	.87	.08	.93	.81	.09	.00
CD 4061-02		Homeland Dist. Sec. 17	4.67	.00	.00	.38	1.52	1.27	.13	.99	.14	.24	.00	.00	.00
CD 4061-03		Homeland Dist. Sec. 34	5.54	.00	.00	.42	1.41	1.01	.11	.90	.19	.76	.69	.05	.00
B5 4101-80		Hornitos Bridge Cafe	-	-	-	1.09	3.76	-	-	1.93	-	2.35	.85	1.13	RE
B5 4102-01		Hornitos Erickson Rch.	14.50	.00	.00	.23	1.48	4.81	.25	2.75	.18	2.25	1.14	1.21	.20
B5 4103		Hornitos Giles Rch.	12.68	.00	T	.18	1.74	4.21	.26	1.89	.27	2.35	.39	1.13	.26
B5 4104-80		Hornitos USCE	(R) 11.24M	-	-	-	1.61	3.65	.31	1.72	.27	2.25	.57	.86M	-
C3 4120		Hossack (Radio)	S 32.88					July 10, 1963 to June 24, 1964							
B4 4148		Huckleberry Lake	S 40.23					September 20, 1963 to September 20, 1964							
B3 4170		Hunters Dam	37.42	.00	T	.40	3.09	11.55	.85	7.92	.42	6.24	1.85	3.74	1.36
B7 4176		Huntington Lake	HPD 31.12	.00	.13	1.15	1.74	8.96	1.05	4.40	.39	5.76	2.45	4.08	1.01
B8 4204		Idria	(R) CD 10.06	.00	.07	.28	1.08	3.86	.08	2.60	.07	1.59	.27	.14	.02
V2 4232		Independence	CD 2.92	.00	1.39	.76	.16	.03	T	.14	T	.02	.07	.35	.00
V2 4235		Independence Onion Vly	HPD -	.00	1.60	1.85	-	-	.59	2.88	.20	2.77	1.13	1.89	.35
B5 4246		Indian Gulch	12.97	.00	.00	.23	1.54	3.91	.50	2.29	.23	1.95	1.08	.94	.30
V7 4278		Inyo Kern	CD 2.38	.00	.30	.74	.60	.30	.01	.34	.00	.09	T	.00	.00
C5 4303		Isabella Dam	9.94	.00	1.16	1.16	2.02	1.20	.46	.97	.07	1.68	.50	.69	.03
B5 4369		Jerseydale GS	29.33	.00	.00	.39	1.88	10.47	1.10	3.53	.02	6.27	2.27	2.12	1.28
C5 4389		Johnsendale	CD -	.00	.85	1.27	1.63	3.73	.70	-	-	3.68	1.69	.90	.22
B7 4442		Kaiser Meadows	S 29.64					June 25, 1963 to June 23, 1964							
C2 4452		Kaweah PH 3	b 16.30	.00	.18	.63	1.39	5.09	.55	1.80	.36	3.69	1.06	1.40	.15
C6 4463		Keene	14.58	.00	.44	1.33	.89	2.39	.97	1.51	.66	3.06	1.95	1.30	.08
B8 4508		Kerlinger	CD 5.26	.00	.00	.21	.85	1.15	.18	1.63	.03	.31	.11	.15	.64
CD 4510-02		Kerman 2 ESE	6.97	.00	.00	.21	1.22	2.21	.31	.58	.04	1.77	.21	.28	.14
C5 4513		Kern Canyon	9.27	.00	T	1.76	1.03	2.10	.10	.77	.90	.97	.73	.91	.00
C5 4518		Kern River Intake No. 3	CD 13.62	.00	.53	1.33	1.69	1.81	.79	2.14	.29	3.23	.97	.73	.11
C5 4519		Kern River Intake 3 SCE	b 12.94	.00	.54	1.12	1.77	2.14	.42	1.78	T	2.46	.89	.71	.11
C5 4520		Kern River PH No. 1	CD 12.60	.00	.03	2.00	1.30	2.60	.19	1.30	1.12	1.75	1.37	.94	.00
C5 4523		Kern River PH No. 3	CD 10.26	.00	.24	1.29	1.90	1.11	.43	1.48	.09	2.40	.48	.77	.07
C5 4527-01		Kernville RS	9.84	.00	.29	1.36	1.87	1.24	.45	1.19	.07	2.25	.37	.69	.06
CO 4534		Kettleman City 1 SSW	CD 4.13	.00	.38	.15	1.16	.65	.12	.76	.06	.45	.40	.00	.00
CO 4535		Kettleman Hills	3.92	.00	.15	.21	1.01	.81	.08	.68	.05	.89	.01	.03	.00
CD 4536		Kettleman Station	CD 4.51	.00	.13	.15	1.02	.13	.85	.13	.81	.38	.01	.01	.00
BD 4590		Knights Ferry 2 SE	CD 14.14	.00	.00	.11	1.73	3.96	.20	3.18	.21	1.94	1.34	1.02	.45
B3 4664		Lake Alpine	S 51.75					July 23, 1963 to July 10, 1964							
B4 4679		Lake Eleanor	S 26.40					June 30, 1963 to June 30, 1964							
V2 4705		Lake Sabrina	S 11.40					June 30, 1963 to June 30, 1964							
O3 4767		La Panza Ranch	HPD 5.91	.00	.00	.64	1.14	.74	.00	1.40	.15	1.49	.09	.26	.00

TABLE A-2 (Cont.)
PRECIPITATION DATA FOR 1963-64
SAN JOAQUIN DISTRICT

Drainage Basin	Alpha Order Number	Station Name	Seasonal Total	In inches											
				July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
B0	4999-03	Livingston 5 W	9.03	.00	.00	.19	1.52	2.26	.17	1.89	.16	1:17	.41	.50	.76
V2	5067	Lone Pine Cottonwood PH	HPD 2.86	.00	.60	1.15	.26	.03	.08	.39	.00	.14	.00	.21	.00
B8	5074	Lone Tree Canyon	CD 5.28	.00	.00E	.15	1.05	.97	.04	1.91	.06	.43	.11	.17	.39
B3	5078	Long Barn Exp. Station	MPD Closed	.00	.38	1.04	2.61	8.53	1.06	7.05	RE				
C6	5098	Lorraine	MPD 13.53	.00	.46	1.34	1.29	1.83	.47	2.09	.64	3.12	.93	1.29	.07
V2	5111-09	LA Aqueduct Intake	2.86	.00	.88	.56	.10	.02	T	.30	.00	.05	.10	.85	.00
BD	5116	Los Banos 5 S	3.63	.00	.00	.03	1.08	.60	.08	.56	.03	.72	.32	T	.21
B0	5117	Los Banos Field Sta.	4.61	.00	.00	.08	1.17	.87	.06	.72	.04	.98	.33	.00	.36
B0	5118	Los Banos	CD 4.85	.00	T	.05	1.07	1.22	.12	.66	.02	.87	.45	T	.39
B8	5119	Los Banos Arburua Ranch	CD 3.36	.00	.00	T	.50	.69	.20	.75	.07	.75	.40	T	T
C0	5151	Lost Mills	MPD 3.86	.00	.05	.17	1.26	1.05	.06	.31	.13	.56	.25	.02	.00
C1	5155-51	Lower Big Creek	-	.00	.00	.35E	1.50	-	-	-	-	-	-	-	-
B4	5160	Lower Kibbey Ridge	S 46.69				September 21, 1963 to September 24, 1964								
B6	5202	Lushmeadows Rch.	21.44	.00	T	.34	1.44	10.50	.54	1.71	T	3.39	1.40	1.54	.58
BD	5233	Madera	CD 7.81	.00	.00	.23	1.45	2.38	.24	.61	.01	1.50	.70	.42	.27
BD	5233-03	Madera ID	-									RB	.42	.00	.00
C0	5257	Magunden	b 6.03	.00	.00	1.01	.80	1.53	.07	.51	.59	.83	.52	.17	.00
V2	5284	Mammoth Pass	S 52.78				October 10, 1963 to October 15, 1964								
B7	5288	Mammoth Pool	S 20.46				July 1, 1963 to June 24, 1964								
B0	5297-01	Manteca No. 2	8.22	.00	.00	.25	1.63	2.54	.11	1.67	.06	.87	.17	.23	.69
BD	5297-02	Manteca SP	-				Closed July 1963								
C7	5338	Maricopa	CD 4.41	.00	.00	.75	1.05	1.70	.06	.58	.00	.17	.02	.08	.00
C7	5338-01	Maricopa FS	5.18	.00	.00	1.04	1.07	1.86	.08	.63	.04	.30	.08	.08	.00
B5	5346	Mariposa	CD 20.95	.00	.00	.28	1.66	7.80	.43	3.29	.11	4.12	1.32	1.51	.43
B5	5346-01	Mariposa Reynolds	20.47	.00	T	.24	2.05	7.30	.48	3.05	.10	3.63	1.44	1.63	.55
B6	5346-04	Mariposa 8 ESE	23.66	.00	.00	.36	1.85	10.01	.47	3.06	.01	3.88	1.90	1.53	.59
B5	5348	Mariposa Circle 9 Rch.	32.43	.00	.00	.39	1.88	12.39	.69	6.33	T	5.01	1.86	2.66	1.22
B5	5352	Mariposa RS	(R) 20.27M	.00	.00	.18	1.68	7.94	.42	3.40	.16M	4.13	1.16	.68	.52
C7	5372-01	Martinez Spring	6.45E	.00E	.00E	.00E	.80	2.35	.10	1.20	.20	1.80	.00E	.00E	.00E
B4	5400	Mather	CD 23.28E	T E	.10E	.15E	2.14	7.07	.54	4.07	.08	3.46	2.73	2.27	.67
B0	5408-80	Mattos Ranch	4.04	.00	.00	.04	1.15	.63	.08	.60	.06	.77	.37	.04	.25
B0	5418-80	Maze Bridge 2 S	7.10	.00	.00	.12	1.33	1.51	.13	1.89	.00	.61	.19	.35	.97
B5	5460	McDiarmid Sta.	26.31E	.00E	.04	.39	1.86	8.19	.72	6.63	.00	3.67	2.06	1.91	.79
C7	5480-01	McKittrick FS	4.18	.00	.00	.39	1.00	1.07	.02	.85	.07	.43	.14	.21	.00
B7	5496	Meadow Lake	CD 22.46	.00	.07	.49	2.20	8.19	.43	2.51	.00	4.20	1.99	1.99	.39
B3	5511	Melones Dam	22.55	.00	.00	.34	2.74	6.57	.40	4.21	.50	3.65	1.33	2.29	.52
BD	5526	Mendota 1 NNW	5.64	.00	.00	.21	.88	1.81	.21	.38	.05	1.20	.49	.19	.22
CD	5526-04	Mendota Marietta Rch.	6.39E	.00E	.00E	.20E	1.00	2.03	.29	.60	.07	1.56	.23	.35	.06
B0	5528	Mendota Dam	5.25	.00	.04	.76	2.44	5.25	.43	3.06	.13	1.37	.34	.17	.23
CD	5529	Mendota Halfway Pump	4.57	.00	.12	.14	.89	1.35	.05	.86	.00	.67	.34	.10	.05
C0	5530	Mendota VDL Farms	-				No record this period								
BD	5532	Merced Fire Station 2	CD 8.76	.00	.00	.38	1.50	2.81	.17	.91	.16	1.75	.40	.27	.41
BD	5532-01	Merced SP	8.22	.00	.00	.13	1.41	2.74	.18	.96	.11	1.56	.45	.28	.40
BD	5532-03	Merced 5 SE	8.94	.00	.00	.24	1.61	2.54	.31	.97	.23	1.78	.48	.33	.45
B0	5534	Merced Fancher Rch.	9.23	.00	.00	.33	1.53	2.66	.25	1.19	.25	1.42	.94	.27	.39
B0	5535	Merced 2	HPD 7.98	.00	.00	.28	1.34	2.90	.14	.84	.11	1.41	.31	.27	.38
B8	5550	Merced Mot Springs	CD 4.09	.00	T	.04	.86	.99	.00	1.10	.00	.97	.00	.07	.06
C3	5669	Milo 5 NE	HPD 23.25	.00	.69	.94	1.83	5.50	.55	2.43	.84	6.01	2.20	1.66	.60
B7	5677-80	Minarets RS	-	.00	.17	.61	1.40	4.55M				Closed for season			
C2	5680	Mineral King	S 22.58				July 26, 1963 to July 27, 1964								
C2	5708	Miramonte Monor Camp	20.19	.00	T	.46	1.92	5.51	.87	2.14	.34	4.74	2.00	2.12	.09
C1	5723	Mitchell Meadow	S 24.95				July 23, 1963 to August 17, 1964								
B4	5735	Moccasin	21.63	.00	.00	.29	1.97	7.59	.40	4.17	.22	3.02	1.43	2.15	.39
B0	5738	Modesto	CD 7.74	.00	.00	.12	1.70	2.18	.09	1.81	.05	1.08	.26	.11	.34
BD	5740	Modesto KTRB	7.30	.00	.00	.12	1.56	2.02	.12	1.72	.05	1.04	.19	.14	.34
B0	5741	Modesto 2	MPD 7.91	.00	.00	.10	1.80	2.03	.05	1.98	.03	1.27	.23	.11	.31
V8	5756	Mojave	MPD 5.15	.00	.29	1.64	1.03	.90	.04	.53	.02	.32	.20	.18	.00
V8	5758	Mojave 2 ESE	CD 4.22	.00	.13	1.38	.95	.85	.00	.35	.20	.01	.15	.20	.00
C5	5777	Monache Meadows	S 7.62				September 25, 1963 to August 5, 1964								
CD	5822-80	Moody Ranch	5.90E	.00	.00	1.40E	.78	1.34	.06	.39	.21	.87	.58	.27	.00
C3	5893	Mountain Home 2	S 28.63				June 24, 1963 to July 11, 1964								
B7	5893	Mountain Rest FFS	20.61	.00	.07	.45	2.05	7.50	.55	1.90	.01	4.18	1.86	1.61	.43
V8	6122	Neenach	CD -	.00	.43	2.24	1.64	1.10	.07	1.01	.17	.97	.28	-	-
BD	6168	Newman 2 NW	CD 6.39	.00	T	.13	1.24	1.44	.05	1.57	T	1.19	.22	.26	.29
B0	6168-01	Newman 1 SE	5.77	.00	.00	.16	.77	1.68	.12	1.44	.00	1.04	.19	.09	.28
C0	6230-50	North Belridge	3.72	.00	T	.37	1.25	.87	.05	.44	.05	.35	.12	.22	.00
B7	6252	North Fork Ranger Sta.	CD 22.82	.00	.04	.38	1.65	8.23	.57	3.77	.00	3.92	1.98	1.71	.57
B0	6303	Oakdale	10.22	.00	T	.16	1.74	3.18	.17	2.14	.05	1.15	.56	.56	.51
B0	6305	Oakdale Woodward Dam	CD 9.74	.00	.00	.28	1.78	3.34	.15	1.60	.02	1.08	.66	.41	.42
B6	6321-80	Oakhurst	20.34	.00	.02	.33	1.61	7.44	.53	3.75	T	3.09	1.46	1.40	.71
CD	6393	Dilfields FFS	6.30	.00	.28	.05	1.53	1.65	.10	1.02	.00	1.06	.53	.08	.00
C7	6395	Oilfields Joaquin Ridge	Ss 7.11E	.00E	.20E	.12E	.95E	2.72E	.00	1.42E	.00	1.70E	.00E	.00	.00
C5	6462	Oxnyx	8.36	.00	.70	1.69	1.89	1.10	.28	.95	.00	1.05	.33	.37	.00
C2	6476	Orange Cove	CD 8.73	.00	.00	.21	1.47	2.24	.61	1.02	.06	1.34	1.20	.55	.03
BD	6490	Orestimba	6.30	.00	.00	.16	1.04	1.65	.05	1.57	.03	.95	.37	.15	.33
B5	6552	Ostrander Lake	S 37.40				September 3, 1963 to July 17, 1964								
B8	6583	Pacheco Pass	MPD -	.00	.00	.32	.76	2.62	-	2.11	.02	1.40	.11	.28	.31
C0	6651	Paloma Ranch	4.81	.00	.00	.67	1.25	1.40	.00	.42	.08	.68	.31	.00	.00
B8	6675	Panoche	CD 4.72	.00	T	.20	.87	1.28	.22	1.14	T	.92	.02	.04	.03
B8	6676	Panoche 2 W	5.21	.00	.00	.44	1.00	1.39	.22	1.36	.21	.04	.11	.16	.28
B0	6677	Panoche Creek	CD -	.00	.00	.14	1.47	1.41	.19	.41	.07	.80	.41	-	-
B0	6679-05	Panoche Water Dist.	4.92	.00	.00	.11	1.52	.70	.38	.52	T	1.27	.22	T	.20
B4	6688	Paradise Meadow	S 38.08				September 14, 1963 to September 15, 1964								
O3	6703	Parkfield	8.80	.00	T	.32	1.00	2.87	T	2.21	.05	1.12	.67	.56	T
C7	6706	Parkfield 7 NNW	HPD -	.00	.00	.20	-	3.72	.10	1.22	.09	.57	.09	.49	.00
B0	6746-01	Patterson	6.53	.00	.00	.11	1.15	1.57	.07	1.59	.00	1.05	.58	.08	.33
C6	6754	Pattaway	CD 8.65	.00	.00	1.14	1.80	2.38	.04	.97	.21	.89	.95	.25	.02
C2	6767	Pear Lake	S 26.80				August 26, 1963 to July 13, 1964								
B8	6847	Pfeiffer Ranch	13.32	.00	.00	.20	1.15	2.77	.53	3.72	.20	2.91	.42	.96	.46
C1	6857	Piedra	CD 12.29	.00	.00	.28	1.49	3.68	.62	1.59	.00	2.62	1.07	.81	.13
B3	6893	Pinecrest Strawberry	34.55	.00	.10	.99	2.77	9.29	1.00	6.35	.15	5.04	2.72	3.89	2.25
C1><															

TABLE A-2 (Cont.)
PRECIPITATION DATA FOR 1963-64
SAN JOAQUIN DISTRICT

Drainage Basin	Alpha Order Number	Station Name	Seasonal Total	In inches											
				July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
B0	7099-11	Poso Canal Co. Hdq.	5.70	.00	.00	.14	1.25	1.68	.06	.55	.03	1.09	.47	.05	.38
B4	7145	Priest	22.16	.00	.00	.32	1.97	7.51	.49	3.88	.16	3.01	1.86	2.31	.65
O2	7150	Priest Valley	13.14	.00	T	.25	1.53	5.11	.20	2.98	.07	1.95	.53	.43	.09
C5	7179	Quaking Aspen	30.88					July 10, 1963 to June 23, 1964							
C1	7259	Rattlesnake Creek	31.62					August 7, 1963 to July 9, 1964							
B6	7270-01	Raymond 3 SSW	12.90	.00	.00	.10	1.80	3.95	.20	1.75	.25	2.95	1.30	.35	.25
B6	7272-01	Raymond 10 N	17.18E	.00E	.00E	.03	2.00	6.68	.40	1.65	.00E	4.20	.70	.90	.62
B6	7273	Raymond 9 N	18.01E	.00	.00	.49	1.85	6.82E	.42E	2.12	.01	3.46E	1.42E	.90	.52
B6	7276	Raymond 12 NNE	18.24	.00	T	.35	1.79	6.96	.41	2.07	T	4.46	.65	1.00	.55
C0	7288	Rector	7.93	.00	.02	.27	2.08	1.56	.33	.84	.18	1.17	1.00	.48	T
C0	7354-80	Reedley MVFD	8.67	.00	T	.14	1.20	2.21	.42	.79	.01	2.90	.51	.49	T
B0	7447-80	Ripon	9.51	.00	.00	.15	1.67	2.80	.18	2.03	.04	1.45	.02	.30	.87
C0	7460	Riverdale	5.02	.00	T	.13	.89	1.39	.10	.77	T	1.41	.09	.21	.03
V2	7510	Rock Creek	12.95					November 4, 1963 to October 14, 1964							
B6	7528	Rocky Village	13.76E	.00E	.00E	.15	1.49	4.48	.43	2.01	.14	3.27	.45	.89	.45
C0	7555	Rosedale	4.50	.00	.00	.71	.68	1.13	.10	.28	.20	.41	.79	.20	.00
B7	7560	Rose Marie Meadow	29.08					July 17, 1963 to June 25, 1964							
C5	7579	Round Meadow	31.77					July 9, 1963 to June 22, 1964							
B4	7623	Saches Springs	45.18					September 20, 1963 to September 23, 1964							
D1	7719	San Benito	HPD 8.53	.00	.00	.05	1.14	1.93	.14	2.09	.29	2.36	.02	.14	.37
Z2	7735	Sandberg WB	(R) CO 11.29	.00	.22	2.52	2.11	2.48	.06	.91	.21	1.61	.51	.66	.00
C0	7753	San Emidio Ranch	CD 6.48	.00	.00	.96	1.93	1.29	.23	.43	.15	.47	.36	.66	.00
O1	7755	San Felipe Highway Sta.	HPD 7.75	.00	.00		1.56	3.62		3.34	.08		.03	.50	-
C0	7800-02	Sanger 1 NE	8.89	.00	T	.13	1.40	3.06	.54	.77	.02	1.81	.75	.41	.00
C0	7800-03	Sanger RS	8.28	.00	T	.15	1.29	2.88	.59	.90	T	1.87	.18	.42	.00
C0	7816	San Joaquin	4.40	.00	.00	.13	.46	1.46	.08	.43	.00	1.19	.55	.04	.06
C0	7819-80	San Joaquin MVFD	4.76	.00	.00	.29	.72	1.35	.00	.15	.00	1.29	.86	.10	T
B7	7817	San Joaquin Exp. Range	HPD 12.73	.00	.00	.28	1.58	4.76	.32	1.29	.00	2.46	1.15	.84	.05
B0	7836-01	San Juan Hdqrs. M & L	6.72	.00	.00	.14	1.25	1.91	.10	.85	.08	1.32	.51	.16	.40
BB	7846	San Luis Dam	CD 6.50	.00	.00	.20	1.31	1.92	.16	1.26	T	.95	.42	.07	.21
B0	7855	San Luis Canal Co. Hdq.	6.47	.00	.00	.20	1.46	1.86	.20	.78	.11	1.12	.34	.08	.32
C0	7987-80	Santiago Ranch M & L	4.53	.00	.00	.45	.98	1.41	.02	.39	.03	.45	.43	.37	.00
D7	8259-02	Simmler R. W. Cooper	7.02	.00	.00	.62	1.26	1.01	.00	1.20	.20	1.74	.62	.00	.37
D7	8259-04	Simmler Maint. Sta.	5.67E	.00	.00	.59	1.17	.74	.00E	1.32	.00	.00	.01	.15	.00
D2	8276	Slack Canyon	HPD 10.14	.00	.00	.17	1.59	3.80	.08	2.15	.13	1.81	.13	.28	.00
C6	8304	Smith Flat	Sa 7.76					July 1, 1963 to June 30, 1964							
B5	8318	Snow Flat	S 38.60					July 17, 1963 to July 14, 1964							
C1	8323-01	Soaproot Saddle	18.21	.00	.00	.73	1.56	5.63	.53	1.91	.00	2.71	2.51	2.41	.22
O7	8326	Soda Lake	6.43	.00	.00	.47	1.28	.71	.00	1.47	.18	2.06	.00	.26	.00
B4	8353	Sonora RS	CD 24.56	.00	.00	.30	2.28	7.31	.42	5.07	.20	4.05	1.62	2.49	.82
G9	8355	Sonora Junction	HPD 10.67	.00	.10	1.41	.54	2.80	.43	1.78	.17	.98	.60	1.46	.40
C0	8375-50	South Belridge	3.77	.00	.13	.29	1.12	.78	T	.56	.09	.41	.20	.19	.00
B0	8378	South Dos Palos	5.39	.00	.00	.04	1.41	1.29	.18	.55	.00	1.13	.41	.20	.18
B5	8380	So. Entrance Yosemite NP	CD 31.18	.00	.40	.63	1.66	13.00	.55	4.33	.03	4.15	1.53	2.61	2.29
V2	8406	South Lake	S 13.50					June 30, 1963 to June 30, 1964							
C0	8407-11	South Lake Farms Hdq.	5.93	.00	.00	.48	1.49	1.17	.22	.71	.11	.83	.82	.10	.00
B3	8450	Spring Gap Forebay	34.21	.00	.63	.53	2.97	10.53	1.07	7.58	.20	5.12	1.15	3.70	.73
C3	8455	Springville 7 ENE	CD 22.05	.00	.36	.87	1.44	6.10	.68	2.00	.64	4.72	2.63	2.18	.43
C3	8460	Springville Ranger Sta.	HPD M	.00	.38	.87	-	-	-	-	-	-	-	-	-
C3	8463	Springville Tule Hdqrs.	HPD 25.09	.00	.58	1.06	1.34	6.38	.80	3.02	.67	5.91	2.56	2.20	.57
C2	8474-80	Squaw Valley Fr.	15.11	.00	.00	.27	1.50	5.29	.65	1.75	.08	2.49	1.72	1.32	.04
B3	8499	Stanislaus Power House	CD 26.28	.00	.00	.17	2.50	7.88	.66	4.35	.27	5.13	1.47	2.90	.95
C1	8510	State Lakes	S 24.70					August 22, 1963 to August 12, 1964							
C0	8520	Stevenson Dist. Sec. 33	6.32	.00	.11	.54	1.11	.80	.31	.91	.11	1.03	1.24	.16	.00
C3	8620	Success Dam	10.41	.00	.21	.45	1.89	2.28	.30	.89	.34	1.97	1.10	.86	.12
C1	8643	Summit Meadow	S 34.74					July 15, 1963 to July 11, 1964							
C7	8752	Taft	HPD 4.13	.00	.00	.61	.81	1.50	.02	.64	.04	.35	.12	.04	.00
C7	8755	Taft KTRK Radio	4.45	.00	T	.56	.86	1.54	.08	.68	.09	.37	.20	.07	.00
C6	8826	Tehachapi	CO 8.61	.00	1.36	1.34	.37	1.10	.00	.80	.42	1.84	1.00	.38	T
C6	8832	Tehachapi Ranger Sta.	HPD 11.06	.00	2.24	1.54	.70	1.86	.49	.73	.47	1.56	1.10	.37	.00
C0	8839	Tejon Rancho	CD 11.52	.00	.35	1.21	1.26	2.85	.32	.93	.71	1.85	1.35	.69	.00
C2	8868	Terminus Dam	11.72	.00	.11	.37	1.52	2.59	.34	.96	.41	2.41	1.46	1.50	.05
C7	8893-80	Thirty-Two Corral	9.15E	.00E	.00E	.00E	1.50	3.30	.00E	1.80	.30	2.25	.00E	.00E	.00E
C2	8912	Three Rivers 6 SE	HPD 17.20	.00	.71	.55	1.64	4.74	.64	1.40	.89	3.34	1.48	1.64	.17
C2	8914	Three Rivers Edison PH 2	CD 15.62	.00	.11	.74	1.56	4.54	.59	1.34	.30	2.86	1.93	1.59	.06
C2	8917	Three Rivers Edison PH 1	CD 15.55	.00	.09	.74	1.56	4.54	.59	1.34	.30	2.86	1.98	1.48	.07
B0	8997	Tracy 2 SSE	HPD 6.06	.00	.00	.30	1.17	1.51	.08	1.63	.05	.51	.07	.14	.60
B8	8999	Tracy Carbons	CD 5.91	.00	.00	.27	1.07	1.51	.10	1.63	.06	.39	.12	.13	.63
C0	9006	Tranquillity Glotz	5.01	.00	T	.24	1.15	1.40	.05	.24	.03	.98	.59	.18	.15
C0	9011-80	Traver 4 ESE	7.26	.00	T	.20	1.58	1.51	.23	.84	.11	1.29	1.27	.23	.00
C1	9025	Trimmer RS	17.89	.00	.01	.39	1.31	6.61	.61	2.45	.00	3.33	1.59	1.42	.17
C0	9051	Tulare	7.05	.00	.08	.31	1.10	1.23	.27	.94	.15	1.17	1.24	.55	.01
C0	9051-04	Tulare Dist. Sec. 27	4.45	.00	.02	.24	1.09	1.10	.04	.78	.09	.64	.39	.06	.00
C0	9052	Tulefield	CD 5.11	.00	T	.88	.86	1.58	T	.56	.13	.55	.33	.22	.00
C3	9059	Tule River Intake	b 22.70	.00	.36	.83	1.42	6.11	.88	2.18	.62	5.18	2.33	2.38	.41
C3	9060	Tule River PH	b 16.86	.00	.66	.88	1.66	3.91	.82	1.58	.23	3.60	1.54	1.79	.19
C5	9061	Tunnel Ranger Station	S 9.92					September 25, 1963 to August 4, 1964							
B3	9062	Tulloch Dam	16.75	.00	.00	.14	1.97	4.37	.78	3.40	.30	2.34	1.24	1.65	.56
B4	9063	Tuolumne Meadows	S 23.07					July 17, 1963 to July 14, 1964							
B0	9073	Turlock	CD 8.20	.00	T	.23	1.45	1.81	.08	1.91	.07	1.13	.86	.34	.32
B0	9073-01	Turlock 5 SW	8.43	.00	T	.25	1.55	1.82	.15	2.06	.05	2.15	.20	.20	T
B0	9073-02	Turlock 8 SW	7.34	.00	.05	.23	1.26	1.52	.10	1.78	.06	1.17	.39	.58	.20
C0	9145	U. S. Cotton Field Sta.	4.56	.00	.03	.61	.99	1.10	.10	.40	.19	.34	.76	.04	.00
B7	9162-80	Upper Chiquito	M	.00	.16	1.22	-	-	-	-	-	-	-	-	-
O1	9189	Upper Tres Pinos	HPD M	.00	.00	.20	.76	1.59	.36	2.45	.22	-	.30	.36	-
B7	9301	Vermilion Valley	S 18.22					June 25, 1963 to June 23, 1964							
C0	9304	Vestal	CD 6.09	.00	.00	.66	1.30	1.13	.10	.62	.18	1.24	.66	.20	.00
C0	9367	Visalia	CD 7.58	.00	.02	.31	1.92	1.20	.18	.73	.17	1.16	1.52	.37	T
C0	9369	Visalia 4 E	7.73	.00	.07	.28	1.73	1.47	.27	.75	.18	1.32	1.10	.56	

TABLE A-2 (Cont.)
PRECIPITATION DATA FOR 1963-64
SAN JOAQUIN DISTRICT

Drainage Basin	Alpha Order Number	Station Name	Seasonal Total	In inches											
				July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
C1	9749	Wishon Res.	29.85	.00	.23	1.13	1.81	9.62	.71	4.46	.19	5.76	2.26	2.79	.89
C5	9754	Wofford Heights	9.42	.00	.65	1.29	1.79	.99	.38	.87	.02	2.01	.53	.78	.11
C1	9773	Woodchuck Meadow						August 9, 1963 to July 7, 1964							
C4	9805	Woody	9.43	.00	.08	.33	1.03	2.61	.33	1.25	.00	1.84	.87	1.09	.00
B5	9855	Yosemite National Pk	26.30	T	.20	.93	1.85	9.55	.81	4.49	.06	3.50	1.49	2.46	.96
		HPO CO													

TEMPERATURE DATA FOR 1963-64
SAN JOAQUIN DISTRICT

Closed for Season

TABLE A-3 (Cont.)
TEMPERATURE DATA FDR 1963-64
SAN JOAQUIN DISTRICT

Drainage Basin	Alpha Order Number	Station Name		In degrees Fahrenheit											
				July	Aug	Sept.	Oct.	Nov	Dec	Jan	Feb	Mar	Apr	May	June
C0	3084	Five Points Diener	Max Min Av Max Av Min Avg	103 52 94.4 60.6 77.5	100 52 93.6 61.1 77.4	104 54 89.5 60.9 75.2	94 41 77.6 53.2 65.4	76 34 61.2 43.0 52.1	57 27 45.6 35.6 40.6	65 26 54.0 35.6 44.8	70 30 61.5 35.6 48.6	84 30 65.8 39.2 52.6	92 39 74.7 44.2 59.4	95 38 79.9 49.4 64.7	109 50 86.7 57.3 73.0
CD	3258-80	Fresno Co. Westside FD	Max Min Av Max Av Min Avg			RB RB RB RB RB	96 41 78.9 52.2 65.6	84 32 64.4 42.1 53.5	60 22 49.3 32.8 41.1	64 25 55.3 33.2 44.3	72 29 63.0 34.4 48.7	85 24 68.8 37.3 53.1	93 34 75.7M 43.6M 59.7M	97 34 81.7 47.6 64.7	110 46 90.8 56.0 73.4
B6	3948	Hidden Valley	Max Min Av Max Av Min Avg	104 51 95.9 59.7 77.8	101 52 93.2 61.9 77.6	104 54 91.3 62.0 76.6	96 43 76.0 52.6 64.3	M M M M M	73 28 58.0 34.2 46.1	67 30 62.3 35.4 45.4	74 30 58.8 34.1 48.2	79 27 68.4 36.9 47.8	86 31 73.7 42.7 55.6	91 33 77.7 46.4 60.1	110 44 86.1 55.3 70.7
B5	4103	Hornitos Giles Ranch	Max Min Av Max Av Min Avg	100 50 91.2 60.8 76.0	100 50 91.3 61.8 76.6	105 52 88.5 62.5 75.5	92 44 74.6 53.6 64.1	73 32 56.7 42.1 49.4	65 26 45.6 33.2 39.4	58 31 50.2 36.0 43.1	66 30 57.9 35.4 46.7	79 30 60.2 39.2 49.7	88 32 68.6 43.7 56.2	89 36 74.7 47.9 61.3	106 44 84.1 56.9 70.5
B3	4170	Hunters Dam	Max Min Av Max Av Min Avg	92 40 85.2 46.5 65.8	96 48 86.7 46.4 66.6	98 42 84.8 47.8 66.3	92 31 74.8 41.2 56.0	74 24 57.2 33.2 45.2	69 20 58.6 28.7 43.6	63 18 50.8 27.1 39.0	70 13 54.4 25.4 41.7	73 21 54.4 27.8 41.1	80 28 61.2 31.9 46.6	80 32 65.2 36.2 50.7	96 32 74.0 42.1 58.1
C5	4303	Isabella Dam	Max Min Av Max Av Min Avg	100 51 92.8 59.5 76.2	101 49 93.4 59.6 76.5	99 51 89.5 58.7 74.1	97 39 89.5 49.7 63.2	75 30 63.0 39.7 51.4	72 22 60.6 31.7 46.2	67 22 52.3 29.5 41.8	70 22 60.9 33.8 45.2	79 30 66.9 33.8 46.5	87 32 73.5 40.5 53.7	89 35 78.5 46.7 60.1	103 42 84.5 56.5 70.5
C6	4463	Keene	Max Min Av Max Av Min Avg	95 46 87.2 53.1 70.1	95 44 87.6 56.7 72.2	98 37 84.3 57.9 71.1	87 28 70.4 47.5 59.0	78 26 61.3 36.9 49.1	72 16 61.1 33.3 47.2	77 23 53.1 28.3 40.7	73 16 58.6 30.1 44.4	79 21 65.7 31.6 44.5	87 29 71.8 37.0 51.3	84 28 71.8 40.3 56.1	103 39 81.8 51.5 66.7
C5	4513	Kern Canyon	Max Min Av Max Av Min Avg	99 51 91.6M 66.2M 78.9M	98 56 91.6M 66.2M 78.9M	98 57 91.6M 66.2M 78.9M	95 47 84.8M 54.9M 64.9M	76 35 60.4M 32.3M 39.0M	60 26 45.8M 32.3M 39.0M	64 33 50.3M 42.7M 49.2M	74 33 60.3M 42.7M 52.7M	86 32 66.6M 40.8M 60.0M	91 38 70.5M 49.4M 60.0M	89 38 74.0M 51.6M 72.7M	106 49 84.5M 60.9M 72.7M
C0	4535	Kettleman Mills	Max Min Av Max Av Min Avg	102 54 94.3 68.0 81.1	102 56 93.0 70.6 81.8	106 50 88.6 67.2 77.9	92 38 73.4 57.9 65.6	76 29 60.0 47.3 53.6	66 34 47.4 39.5 40.9	63 36 52.0 44.0 45.8	72 36 59.4 45.6 51.7	85 35 62.5 45.6 54.0	92 39 71.4 50.1 60.8	96 40 77.4 54.8 66.1	109 50 86.6 63.2 74.9
B0	4999-03	Livingston 5W	Max Min Av Max Av Min Avg	105 45 97.0M 53.7M 75.4M	103 46 97.1M 54.4M 75.8M	109 47 92.5M 55.1M 73.8M	99 35 80.1M 48.6M 64.4M	75 31 60.4M 41.1M 50.8M	55 25 44.1M 34.5M 39.3M	62 23 53.3M 32.9M 43.1M	74 27 65.4 31.0 48.2	84 33 68.2 36.8 52.5	97 33 77.8M 40.7M 59.2M	101 32 83.2M 43.5M 63.4M	115 41 90.9M 51.6M 71.3M
BD	5117	Los Banos Field Sta.	Max Min Av Max Av Min Avg	104 48 92.5 57.8 75.2	101 45 94.3 57.4 75.8	103 50 89.4 56.7 73.0	96 39 77.4 49.3 63.4	73 28 60.5 39.2 49.8	54 22 46.1 31.8 39.0	63 21 54.0 32.4 43.2	71 29 62.9 34.2 48.6	78 25 66.0 39.1 52.5	92 33 77.0 44.1 59.0	93 36 77.0 46.8 61.9	107 37 85.9 52.7 69.0
B6	5202	Lushmeadows Rch.	Max Min Av Max Av Min Avg	100 52 M M M	102 44 M M M	102 50 M M M	M M M M M	76 31 58.1M 38.6M 48.4M	72M 29 61.2M 39.9M 50.6M	72 27 52.3M 33.5M 42.9M	73 28 61.9 35.5M 48.7M	77 27 60.7M 37.1M 48.9M	87 29 65.7M 41.4M 53.6M	87 30 M M M	105 39 83.0M 54.9M 69.0M
C0	5257	Magunden	Max Min Av Max Av Min Avg	106 56 97.7 64.3 81.0	105 40 97.4 64.5 81.0	106 56 90.9 63.8 77.4	96 48 77.8 56.1 67.0	78 35 64.3 44.4 54.4	60 26 47.9 34.5 41.2	68 30 56.7 35.4 45.6	75 32 63.9 35.4 49.8	91 32 66.6 40.8 53.7	95 38 73.5 47.2 60.4	96 41 81.4 52.4 66.9	113 51 91.8 60.8 76.3
B5	5348	Mariposa Circle 9 Rch.	Max Min Av Max Av Min Avg	100 44 93.3 51.0 72.1	102 44 91.5M 52.0M 71.8M	97 42 89.0 M M	78 28 67.0M 41.9M 54.4M	70 23 55.3M 35.3M 45.3M	70 19 58.1M 31.1M 44.6M	66 22 48.5 27.1M 37.8M	70 17 56.7 27.3 42.0	82 22 63.0M 28.6M 40.8M	98 24 63.4M 34.1 48.8M	109 34 72.0M 38.9M 55.5M	139 49 85.5M 47.6M 66.6M
B5	5352	Mariposa RS	Max Min Av Max Av Min Avg	99 47 91.5 54.8 73.1	100 47 92.3 57.3 74.8	103 48 89.0 57.1 73.0	98 40 77.2 48.8 63.0	79 30 M M M	78 26 M 30.7M M	75 25 M 30.7M M	71 22 M 33.2M M	79 29 60.6M 33.2M 46.9M	86 29 68.2M 38.9M 53.6M	88 31 72.8 43.3 58.1	104 35 82.9 48.3 65.6
B7	5496	Meadow Lake	Max Min Av Max Av Min Avg	90 53 82.2 62.5 72.3	91 54 83.8 63.1 73.4	94 44 79.5 60.1 69.8	92 30 69.1 51.5 60.3	74 25 55.9 40.4 48.0	68 23 58.4 40.4 49.4	72 26 50.6 33.7 42.2	66 26 53.0 36.5 44.8	70 21 50.3 34.6 42.5	78 28 57.2M 44.5 48.5M	84 29 63.7 44.5 54.1	95 35 74.8 55.6 65.2
B7	5677-80	Minarets RS	Max Min Av Max Av Min Avg	86 42 80.9 49.3 65.1	90 40 82.9 50.4 66.6	90 40 77.6 50.6 64.1	88 30 68.0 41.1 54.6								M M M M M
B0	5740	Modesto KTRB	Max Min Av Max Av Min Avg	99 51 91.0 56.8 73.9	100 49 91.5 57.1 74.3	103 52 88.4 58.2 73.3	94 39 76.6 51.1 63.8	71 32 59.1 43.3 51.2	54 27 46.7 35.7 41.2	61 25 54.6 36.3 45.4	74 27 64.7 32.9 48.8	83 27 67.2 38.5 52.8	92 34 75.0 43.1 59.0	93 36 78.8 47.6 63.2	107 46 85.3 54.1 69.7
B7	5893	Mountain Rest FPS	Max Min Av Max Av Min Avg	91 51 83.6M 59.6M 71.6M	92 50 86.0 61.3 73.6	99 45 83.0M 59.1M 71.0M	89 37 70.3M 50.5M 60.4M	M M M M M	62 25 M M M	62 26 51.5M 33.2M 42.3M	62 22 54.0M 34.4M 44.2M	70 22 53.8M 34.2M 44.0M	77 26 62.0M 41.7M 51.8M	79 26 65.6M 43.4M 54.5M	95 34 76.5M 52.8M 64.7M
C0	6230-50	North Belridge	Max Min Av Max Av Min Avg	105 50 96.1 67.8M 81.9M	106 59 92.8 66.1M 79.4M	105 62 91.5 66.8 79.2	96 48 77.2 57.3 67.2	78 37 63.1M 45.2M 54.2M	62 25 47.7 35.5 40.8	65 28 55.1 37.2 45.3	75 34 62.6 37.2 49.9	87 32 66.7M 48.1 53.9M	94 34 74.7 54.2 61.4	95 41 79.6 63.4 66.9	109 47 89.7 63.4 76.6

TABLE A-3 (Cont.)
TEMPERATURE DATA FOR 1963-64
SAN JOAQUIN DISTRICT

Drainage Basin	Alpha Order Number	Station Name		In degrees Fahrenheit												
				July	Aug	Sept.	Oct.	Nov	Dec	Jan.	Feb	Mar.	Apr	May	June	
B6	6321-80	Oakhurst	Max Min Av Max Av Min Avg	95 33 88.4 42.5 65.4	97 36 89.2 43.6 66.4	103 40 86.9 45.8 66.4	95 29 74.7 39.3 57.0	80 24 61.8 31.8 46.8	73 18 61.6 22.1 41.8	77 16 55.1 24.5 39.8	69 13 59.9 20.1 40.0	75 16 56.8 28.5 42.6	80 23 62.2 33.6 47.9	81 21 67.6 37.0 52.3	97 32 78.2 42.4 60.3	
B3	6893	Pinecrest Strawberry	Max Min Av Max Av Min Avg	84 38 79.1 45.8 62.4	86 38 77.7 44.8 61.2M	88 42 75.7 47.3 61.5	84 32 67.1 40.6 53.8	64 22 51.7 31.2 41.4	66 14 54.6 27.0 40.8	60 18 47.5 24.6 36.0	64 16 54.2 24.1 39.2	68 10 49.2 24.2 36.6	74 12 56.7 28.7 42.7	78 22 60.4 32.8 42.7	88 30 68.7 39.9 54.3	
C1	6895	Pine Flat Dam	Max Min Av Max Av Min Avg	105 50 97.6 58.1 77.8	105 49 97.8 56.6 77.2	110 51 93.2 58.4 75.8	100 42 79.4 51.1 65.2	78 34 63.0 41.3 52.2	67 27 49.4 33.5 41.4	63 27 54.4 32.5 43.4	71 28 61.8 32.6 47.2	84 27 64.1 36.6 50.4	92 35 72.4 43.1 57.8	94 33 78.8 47.5 63.2	109 43 90.1 53.9 72.0	
C1	6902	Pinehurst	Max Min Av Max Av Min Avg	88 51 82.3M 58.3M 70.3M	89 50 82.9 58.7 70.8	92 47 82.0 58.7 70.4	92 37 69.8M 48.2M 59.0M	M M M M M	M M M M M	M M M M M	M M M M M	M M M M M	M M M M M	78 30 66.7M 43.1M 54.9M	94 36 74.6 52.1 63.4	
B7	6959-80	Placer GS	Max Min Av Max Av Min Avg	94 40 87.8M M M	96 44 87.8M 47.2M 67.5M	96 44 87.1M 48.7M 67.9M	M M M M M	Closed for Winter Season						M M M M M	84 26 69.0M 39.0M 54.0M	96 36 79.4M 46.2M 62.8M
B6	7273	Raymond 9 N	Max Min Av Max Av Min Avg	102 45 94.5 54.1 74.3	106 46 96.7M 57.9M 77.3	108 49 94.0 57.1 75.6	97 40 94.0 57.0 M	- - - - -	- - - - -	65 25 53.7 31.0 42.4	70 24 63.5 29.4 46.5	- - - - -	- - - - -	89 27 77.0 39.9 58.5	108 40 87.6 48.7 68.2	
CD	7288	Rector	Max Min Av Max Av Min Avg	102 53 95.3 58.8 77.0	102 52 94.3 59.5 76.3	104 49 90.5 60.3 75.0	96 33 77.1 52.0 64.6	79 33 63.1 43.3 53.2	58 29 44.6 35.4 40.0	70 26 54.0 34.7 44.4	72 30 63.1 33.7 48.4	85 30 66.4 45.2 52.4	93 35 73.5 45.2 59.4	95 37 79.6 50.7 64.7	110 50 88.5 56.7 72.6	
CO	7460	Riverdale	Max Min Av Max Av Min Avg	102 51 95.9 58.3 77.1	102 51 93.9 58.5 76.2	106 53 95.8 58.8 74.3	94 40 77.3 49.8 63.6	76 31 62.0 41.0 51.5	53 26 44.4 33.8 39.1	65 27 54.4 34.6 44.0	72 24 63.2 33.6 47.4	83 32 66.3M 40.2 52.5M	92 36 74.2 43.3 58.8	94 39 79.1 48.1 63.6	113 50 88.2 55.4 71.8	
CO	7800-02	Sanger 1 NE	Max Min Av Max Av Min Avg	104 53 96.5 58.3 77.4	104 52 96.3 59.6 77.2	105 54 90.8 59.6 75.2	94 42 75.9 52.7 64.3	72 37 60.7 45.5 53.1	57 29 46.3 38.0 42.2	63 30 54.1 37.9 46.0	71 30 62.8 40.2 49.3	84 29 64.6 40.2 53.3	95 37 74.9 46.3 60.6	95 37 81.5M 50.1M 65.8M	108 50 90.3 54.4 73.4	
CO	8375-50	South Belridge	Max Min Av Max Av Min Avg	104 54 96.5M 63.8M 80.1M	103 53 95.9 63.8 79.8	105 55 91.3 62.6 76.9	97 44 77.6M 52.1M 64.8M	76 33 64.2M 41.0M 52.6M	62 22 47.1M 30.7M 38.9M	63 27 56.0M 33.0M 44.5M	78 31 64.6 36.2 50.4	87 31 67.4 39.4 53.4	94 38 74.8 47.0 60.9	95 40 80.4 50.8 65.6	110 50 90.4M 60.6M 75.5M	
CO	8407-11	South Lake Farms Hdq.	Max Min Av Max Av Min Avg	103 49 96.0 57.5 76.7	103 49 95.7 59.2 77.4	108 54 91.2 60.1 75.6	94 42 77.0 51.6 64.3	77 30 63.0 40.6 51.8	59 27 44.1 35.1 39.6	67 24 54.6 33.8 44.2	74 25 62.6 31.2 46.9	83 27 66.0 36.6 51.3	92 35 73.7 43.5 58.6	94 33 79.1 45.9 62.5	108 48 88.8 54.2 71.5	
B3	8450	Spring Gap Forebay	Max Min Av Max Av Min Avg	M M M M M	M M M M M	M M M M M	86 30 67.1M 39.8M 53.5M	68 22 50.5M 30.9M 40.7M	66 18 55.7M 28.9M 42.3M	58 18 43.9M 25.4M 34.7M	62 18 51.3M 25.1M 38.1M	66M 14M 48.0M 25.1M 36.6M	68 12 52.3M 28.4M 40.4M	74 22 61.8M 33.4M 47.6M	M M M M M	
B3	8499	Stanislaus Power House	Max Min Av Max Av Min Avg	99 45 91.5 53.5 72.5	103 46 92.8 55.8 74.3	104 48 90.1 57.1 73.6	100 36 73.8 43.8 58.8	75 27 60.6 37.2 48.9	63 25 55.3 30.5 42.9	68 22 54.1 29.5 41.8	72 23 62.5 28.0 45.3	82 23 62.7 32.6 47.7	88 30 72.4 41.3 56.9	91 31 76.6 46.4 61.5	106 42 85.5M 53.7M 69.6M	
C3	8620	Succena Dam	Max Min Av Max Av Min Avg	102 54 94.6 62.1 78.4	101 53 94.5 62.8 78.6	105 56 90.6 63.6 77.1	99 47 77.5 55.7 66.6	78 36 63.6 45.0 54.3	65 26 49.0 34.2 41.6	67 31 55.2 34.7 44.9	72 31 62.9 36.9 49.9	82 34 64.8 40.8 52.8	94 37 72.6 47.3 60.0	94 37 78.7 50.8 64.8	111 47 89.3 58.0 73.7	
C7	8755	Taft KTKR Radio	Max Min Av Max Av Min Avg	103 56 94.0M 65.2M 79.6M	102 55 94.2 66.0 80.1	104 51 88.4 63.3 75.8	96 48 75.5 55.5 65.5	76 35 62.3 43.4 52.9	61 26 47.6 31.9 39.8	65 22 54.4M 34.0M 44.2M	73 31 61.2 35.7 48.5	85 32 70.4 40.2 51.9	92 37 76.9 46.5 58.4	92 38 81.5M 50.5M 63.7	107 44 87.7 59.7 73.7	
C2	8868	Terminus Dam	Max Min Av Max Av Min Avg	101 54 93.9 63.9 78.9	101 54 93.6 65.4 79.5	105 57 89.7 64.6 77.1	97 49 76.9 56.0 66.4	76 35 62.1 45.0 53.6	63 26 47.0 33.6 40.3	66 35 54.2 35.4 44.8	70 32 61.5 37.7 49.6	85 33 63.2 40.8 52.0	90 38 71.5 46.6 59.1	93 36 77.4 51.0 64.2	109 47 87.8 58.1 73.0	
CO	9006	Tranquillity Gltz	Max Min Av Max Av Min Avg	100 52 91.4 59.3 75.3	98 50 88.5 59.4 74.0	98 54 84.6M 59.4M 72.0M	88 40 75.7M 50.9M 63.3M	77 28 59.8 33.3 50.8	48 24 42.5 33.3 37.9	M M 50.8M 33.0M 41.9M	M M M M M	74 28 60.4 36.4 48.4	84 35 68.8 42.2 55.5	M M 72.0M 44.9M 58.5M	M M M M M	
C1	9025	Trimmer RS	Max Min Av Max Av Min Avg	102 45 95.1 57.5 76.3	103 49 96.2 61.0 78.6	104 49 91.5 61.3 76.4	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	
CO	9051	Tulare	Max Min Av Max Av Min Avg	106 54 97.9 60.4 79.1	104 54 97.1 60.6 78.8	107 56 92.1 60.5 76.3	98 44 78.4 52.5 65.4	78 33 62.5 43.4 53.0	55 28 43.2 35.8 39.5	68 26 53.6 35.7 44.6	76 30 63.1 34.5 48.8	86 30 65.9 39.0 52.4	96 37 75.0 45.7 60.4	97 40 81.8 49.8 65.8	113 48 90.8 57.1 74.0	
CO	9145	U. S. Cotton Field Sta.	Max Min Av Max Av Min Avg	102 55 94.8 62.6 78.7	101 50 93.8 61.5 77.6	108 57 90.1 62.1 76.1	95 46 76.7 53.6 65.2	80 34 62.6 43.9 53.2	59 27 45.3 34.7 40.0	68 26 54.8 34.1 44.4	76 27 63.4 33.1 48.2	86 30 66.5 46.5 53.0	94 39 73.8 50.6 60.2	96 39 80.6 58.0 65.3	111 48 89.3 58.8 74.1	

TABLE A-3 (Cont.)

TEMPERATURE DATA FOR 1963-64
SAN JOAQUIN DISTRICT

Orange Boat	Alpha Order Number	Station Name		1963 In degrees Fahrenheit											
				July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
B7	9162-80	Upper Chiquito	Max Min Av Max Av Min Avg	78 26 74.2M 32.1M 53.1M	82 22 72.4M 28.3M 50.4M	84 23 69.9M 30.7M 50.3M				Closed for Winter Season					
CD	9304	Vestal	Max Min Av Max Av Min Avg	104 57 96.7 65.4 81.0	103 61 97.0M 67.6M 82.3M	107 58 91.7 66.4 79.6	97 51 78.1 58.2 68.2	79 37 64.1M 47.0M 55.6M	63 28 49.4 37.2 43.3	69 27 57.3 37.1 47.2	74 32 65.2M 37.9M 51.6M	85 32 67.3M 42.3M 54.8M	98 39 76.8M 49.6M 63.2M	97 39 82.6M 53.0M 67.8M	113 53 91.8M 63.3M 77.6M
BO	9565	Westley	Max Min Av Max Av Min Avg	98 47 91.2M 53.7M 72.4M	97 48 91.4M 54.4M 72.9M	M M M M M	M M M M M	70 29 M M M	53 26 M M M	60 27 53.8M 34.5M 44.2M	M M 63.4M 35.0M 49.2M	79 30 66.7M 39.9M 53.3M	88 33 73.5M 42.7M 58.1M	90 36 78.0M 45.1M 61.1M	105 47 85.4M 51.8M 68.6M
C1	9749	Wishon Res.	Max Min Av Max Av Min Avg	80 40 74.5M 46.4M 60.4M	M M M M M	90 37 M M M	81 30 63.1M 38.8M 51.0M	M M M M M	M M M M M	55 10 43.4M 22.8M 33.2M	55 13 47.0M 22.7M 34.9M	61 7 43.0M 21.3M 32.2M	68 14 51.7M 27.5M 39.6M	70 19 M M M	82 29 65.1M 41.0M 53.1M
C4	9805	Woody	Max Min Av Max Av Min Avg	108 49 92.8 58.2 75.5	M 37 M 58.6 M	104 34 89.5 55.7 72.6	94 41 74.4 51.4 62.9	77 30 62.0 40.2 51.1	67 24 52.0 30.0 41.0	65 25 52.4M 31.9M 42.2M	68 28 58.8 33.6 46.2	81 27 60.0 35.9 47.9	92 33 68.9 41.6 55.2	92 32 75.8 45.8 60.8	109 41 86.9 56.8 71.9

TABLE A-4
MONTHLY SUMMARY OF EVAPORATION STATION DATA

Drainage Basin	Alpha Order Number	Station Name		1963						1964					
				July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
C0	0332-02	Arvin-Frick	Evap	9.69	7.85	5.50	3.35	2.05	.77	1.46	3.32	4.46	6.06	8.18	9.78
			Wind	1723	1318	1046	1040	1720	1280	1669	1944	2477	2458	2766	3107
			Precip	.00	.02	1.20	.76	1.51	.15	.49	.44	.52	.69	.50	.02
			Av Max	92	93	87	75	61	42	52	61	64	70	78	86
			Av Min	57	56	58	48	38	29	28	29	35	42	47	54
C0	2013	Corcoran El Rico 1	Evap	14.03E	13.02	8.25	4.63	1.32	.41	1.09	2.94	4.98	6.73	8.77	13.33
			Wind	2390E	2115	1940	1720	1520	1120	1515	1425	2520	2110	2216	2834
			Precip	.00	.06	.51	1.15	.92	.10	.86	.08	.95	.53	.29	.00
			Av Max	96.9	95.0	90.2 E	78.6	62.4	44.3 M	53.1	61.7	65.5	73.4	79.5	90.1
			Av Min	57.5	57.9	59.2 E	53.5	43.9	36.1 M	34.4	31.2	35.5	41.2	45.2	54.0
C6	2222-80	Cummings Valley	Evap	11.74	11.33	8.17	4.55	3.75	6.05	3.24	4.32	3.93	5.38	6.99	10.27
			Wind	1810	1940	1720	1520	2850	4070	3500	3320	2920	2720	2680	2470
			Precip	.00	.70	1.62	.95	2.44	.72	1.06	.65	2.19	1.39	1.42	.10
			Av Max	84.1	85.6	83.5	73.4	58.9	59.1	53.2	56.2	54.1	58.5	63.3	74.3
			Av Min	43.9	44.9	48.7	39.2	33.0	28.5	23.3	22.1	26.6	31.2	34.2	42.6
B4	2473	Don Pedro Reservoir	Evap	13.21	12.28	8.80	4.53	1.89	.75	1.46	2.63	3.86	6.24	6.93	11.32
			Wind	-	-	-	-	-	-	-	-	-	-	-	-
			Precip	.00	.00	.25	1.72	4.98	.63	2.80	.35	3.19	.78	1.53	.50
			Av Max	95.3	95.2	91.8	78.0	51.2	47.5	52.9	61.3	63.0	71.9	77.3 M	86.3
			Av Min	58.0	58.3	57.8	49.0	39.4	30.8	31.4	30.4	35.5	39.1	44.0 M	51.4
C5	4303	Isabella Dam	Evap	14.15	12.21	8.00	4.73	2.48	2.05	2.27	3.21	4.34	6.30	8.92	11.81
			Wind	2344	1947	1501	1544	1595	1202	1932	1493	2291	2181	2600	2655
			Precip	.00	1.16	1.16	2.02	1.20	.46	.97	.07	1.68	.50	.69	.03
			Av Max	92.8	93.4	89.5	76.8	63.0	60.6	52.3	60.9	59.2	66.9	73.5	84.5
			Av Min	59.5	59.6	58.7	49.7	39.7	31.7	31.4	29.5	33.8	40.5	46.7	56.5
B0	5117	Los Banos Field Sta.	Evap	16.02	13.35	9.58	5.08	1.19	.46	1.53	3.63	6.06	9.61	11.27	14.64
			Wind	4056	3156	2687	2082	1542	1167	1933	2070	3588	3709	4259	5187
			Precip	.00	.00	.08	1.17	.87	.06	.72	.04	.98	.33	.00	.36
			Av Max	92.5	94.3	89.4	77.4	60.5	46.1	54.0	62.9	66.0	74.0	77.0	85.9
			Av Min	57.8	57.4	56.7	49.3	39.2	31.8	32.4	34.2	39.1	44.1	46.8	52.7
C1	6895	Pine Flat Dam	Evap	12.07	9.97	7.47	4.23	1.40	.88	1.23	2.37	3.43	5.34	7.32	10.05
			Wind	721	628	703	681	631	701	790	878	991	914	867	916
			Precip	.00	T	.20	1.53	3.96	.65	1.59	.03	2.77	1.13	1.12	.08
			Av Max	97.6	97.8	93.2	79.4	63.0	49.4	54.4	61.8	64.1	72.4	78.8	90.1
			Av Min	58.1	56.6	58.4	51.1	41.3	33.5	32.5	32.6	36.6	43.1	47.5	53.9
B6	7273	Raymond 9 N	Evap	11.99	9.44E	9.60E	M	M	M	1.78	2.49	M	M	7.45	8.07
			Wind	579	532E	482E	346	M	M	467	435	M	M	408	696
			Precip	.00	.00	.49	1.85	M	M	2.12	.01	M	M	.90	.52
			Av Max	94.5	96.7 M	94.0	M	M	M	53.7	63.5	M	M	77.0	87.6
			Av Min	54.1	57.9 M	57.1	M	M	M	31.0	29.4	M	M	39.9	48.7
C3	8620	Success Dam	Evap	14.20	12.83	9.12	5.18	2.20	.79	1.52	3.18	4.34	7.21	9.90	12.02
			Wind	1776	1648	1575	1363	1266	1084	1362	1545	1530	1674	1837	1727
			Precip	.00	.21	.45	1.89	2.28	.30	.89	.34	1.97	1.10	.86	.12
			Av Max	94.6	94.5	90.6	77.5	63.6	49.0	55.2	62.9	64.8	72.6	78.7	89.3
			Av Min	62.1	62.8	63.6	55.7	45.0	34.2	34.7	36.9	40.8	47.3	50.8	58.0
C7	8755	Taft KTKR Radio	Evap	14.21	13.56	9.06	5.40	2.55	1.08	1.93	4.04	5.81	9.12	10.91	13.21
			Wind	750	710	570	570	660	510	1080	1150	1710	2000	1740	1560
			Precip	.00	T	.56	.86	1.54	.08	.68	.09	.37	.20	.07	.00
			Av Max	94.0 M	94.2	88.4	75.5	62.3	47.6	54.7 M	61.2	63.6	70.4	76.9	87.7
			Av Min	65.2 M	66.0	63.3	55.5	43.4	31.9	34.0 M	35.7	40.2	46.5	50.5	59.7
C2	8868	Terminus Dam	Evap	13.64	12.77	9.65	5.27	2.11	.77	1.52	3.39	4.42	6.25	9.20	12.19
			Wind	1268	1445	1621	1474	1476	1237	1634	1802	1756	1356	1581	1618
			Precip	.00	.11	.37	1.52	2.59	.34	.96	.41	2.41	1.46	1.50	.05
			Av Max	93.9	93.6	89.7	76.9	62.1	47.0	54.2	61.5	63.2	71.5	77.4	87.8
			Av Min	63.9	65.4	64.6	56.0	45.0	33.6	35.4	37.7	40.8	46.6	51.0	58.1
C0	9145	U. S. Cotton Field Sta.	Evap	12.29	10.93	7.31	4.75	1.70	.62	1.19	3.72	5.03	7.89	10.89	13.17
			Wind	1156	962	793	762	668	586	1028	1161	2104	2443	2841	2673
			Precip	.00	.03	.61	.99	1.10	.10	.40	.19	.34	.76	.04	.00
			Av Max	94.8	93.8	90.1	76.7	62.6	45.3	54.8	63.4	66.5	73.8	80.6	89.3
			Av Min	62.6	61.5	62.1	53.6	43.9	34.7	34.1	33.1	39.5	46.5	50.0	58.8
BD	9565	Westley	Evap	9.10E	7.16	M	M	M	.38	3.40	3.62	5.52	7.29	8.21	9.46
			Wind	-	-	-	-	-	-	-	-	-	-	-	-
			Precip	.00	.00	M	M	1.64	.07	1.86	.00	.73	.19	.32	.85
			Av Max	91.2 M	91.4 M	M	M	M	M	53.8 M	63.4 M	66.7 M	73.5 M	78.0 M	85.4 M
			Av Min	53.7 M	54.4 M	M	M	M	M	34.5 M	35.0 M	39.9 M	42.7 M	45.1 M	51.8 M

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SURFACE WATER FLOW

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INTRODUCTION

This appendix presents surface water data for the Water Year 1964 which is from October 1, 1963, to September 30, 1964. The data presented in this appendix consists of daily mean discharge, station locations, daily mean gage heights, and diversion quantities.

Stream gaging station descriptions presented show the historic maximum discharge of record and the maximum discharge for the report year. Locations of the gaging stations and other important data on the length of record and datum of gage are also presented.

Quantities of daily mean discharge for most stations shown are computed by an electronic computer. The gage height data are fed into the computer simultaneously with rating and shift correction data. Daily mean discharge, total monthly acre-feet, and instantaneous maximum and minimum discharge are computed. The gage height data are extracted from the standard recorder chart by a semiautomatic chart-reading machine and put into machine language. The record for those stations affected by backwater conditions is not adaptable to computation by machine methods and is computed manually by standard methods.

Daily mean stage tables are presented for key stations on the major streams in the San Joaquin Valley. These daily mean stages are computed by the electronic computer, as mentioned above. The gage heights are computed to the nearest one-hundredth of a foot, and the major crests for the year are shown.

Quantities of water diverted for use are shown as monthly total acre-feet and total acre-feet diverted for a certain reach of a stream.

Definition of Terms

A list of definition of terms as used herein follows:

Second-foot or cubic foot per second is the unit rate of discharge of water. It is a cubic foot of water passing a given point in one second.

Acre-foot is the quantity of water required to cover one acre to a depth of one foot. It is equivalent to 43,560 cubic feet or 325,850 gallons.

Drainage area of a stream above a specific location is that area, measured in a horizontal plane, which is enclosed by a drainage divide.

Unimpaired runoff is the flow that would occur naturally at a point in a stream if there were: (1) no upstream controls such as dams and reservoirs; (2) no artificial diversions or accretions; and (3) no changes in ground water storage resulting from development. Unimpaired flow is computed from measured runoff by allowing for man-made changes in natural conditions.

Water Year is the 12-month period from October 1 of any year through September 30 of the subsequent year and is designated by the calendar year in which it ends.

Surface Water Gaging Station Designation

The index number for each gaging station is composed of a number which begins with an alphabetical letter designating the hydrographic area, followed by the first digit which indicates the main river basin. The second digit refers to a tributary of the main river basin. The hydrographic area and the river basin are outlined on Plate B-1. The remaining three digits are used to number stations in an upstream direction with the lowest number at or near the mouth. The digit 9, which is the third from the left, indicates that the station is a surface gravity diversion station. Each station is listed by name as well as by machine index number.

EXPLANATION OF TABULAR DATA

The tabular data presented in this appendix are divided into the general categories of daily mean discharge, daily mean stage, and monthly diversions.

The area to which these data pertain is shown as Area IV on page iii and on Plate B-1.

Table B-1 presents gaging station additions and discontinuations.

Lakes and Reservoirs

Two types of data are presented for lakes and reservoirs. Table B-2 presents inflow to Millerton Lake. Table B-3 presents the daily content of Millerton Lake in thousands of acre-feet.

Daily Mean Discharge

Presented in Table B-4 are records of daily mean discharge, gaging station location, period of record, maximum flow of record, maximum and minimum flow for the season, as well as the total flow in acre-feet for the 1963-64 water year.

The streamflow tables are arranged, for each stream or stream system, in downstream order. Stations on a tributary entering between two main stem stations are listed between those stations, and in downstream order on that tributary. A stream gaging station is named after the stream and the nearest post office (Merced River at Cressey) or well-known landmark (San Joaquin River at Fremont Ford Bridge).

Each stream gaging station has a stage-discharge relationship or rating developed. The rating gives the flow in second-feet for each gage height at the station. When flows at a single station occur in excess of 140 percent of the highest measurement on the rating, the computed daily mean discharges from the electronic computer are shown as estimated. Normally, the rating is fairly permanent where there is a fixed channel and a fixed flow regimen at the station. The rating varies, however, where the bed at the channel is of loose shifting sand, or where aquatic growth builds up in the channel changing the flow regimen.

Where the rating is not permanent and varies periodically, more frequent measurements of discharge are necessary to accurately determine the daily mean discharge.

All streamflow data reported herein are derived through the use of mechanical, arithmetical, and empirical operations and methods. Since the results are affected by inherent inaccuracies in the procedures and equipment used, it becomes necessary to establish limits of accuracy for which the data are reported. The following is a listing of significant figures used in reporting streamflow data:

1. Daily flows - second-feet
 - 0.0 - 9.9 Tenths
 - 10 - 99 2 significant figures
 - 100 - up 3 significant figures
2. Means - second-feet
 - 0.0 - 99.9 Tenths
 - 100 - 999 3 significant figures
 - 1000 - above 4 significant figures

The water year totals are reported to a maximum of four significant figures.

Daily Mean Gage Heights

Presented in Table B-5 are records of daily mean gage heights for key stations on major streams in the San Joaquin Valley for the 1963-64 water year.

At the bottom of the stage tables are shown the major river crests occurring for the 1963-64 water year. The table also shows the location of the station, maximum gage height of record, period of record, and datum of gage. The elevation of water surface at the gaging station is obtained by adding the gage height reading to the elevation of the gage datum presented in each table. Gage height for stage tables are computed from recorder charts and are reported to one-hundredth of a foot.

Of the 26 stations for which daily mean gage heights are presented in this report, 13 have computed daily mean discharge. These data are included in the streamflow tables.

Diversions

Presented in Table B-6 are the amounts of water diverted for irrigation during the period October 1, 1963, through September 30, 1964. The amounts of water diverted by pumping were determined by rating the capacity of each diversion pumping plant and collecting data on hours of operation. The amounts of water diverted by gravity (indicated by "Gravity" in column headed "Number and Size of Pump") were determined either by calibrating suitable measuring devices or by rating canals in a manner similar to that used to rate streamflow stations.

Because of the intermittent operation of most diversion facilities, the monthly diversion values are reported in acre-feet to three significant figures. The totals for individual water users and stream reaches are reported to four significant figures.

Table B-7 shows the amounts of water diverted by east side canals and the several east side irrigation districts that divert water from the San Joaquin, Merced, Tuolumne, and Stanislaus Rivers.

Presented in Table B-8 are the amounts of water imported to the San Joaquin Valley via the Delta-Mendota Canal and the amount of water exported from the San Joaquin Valley via the Hetch Hetchy Aqueduct to the city and county of San Francisco.

Presented in Table B-9 are the deliveries from the Central Valley Project canals.

The data presented in Tables B-7, B-8, and B-9 were supplied by other agencies, are published as received, and are not necessarily rounded to the criteria which are used for data computed by the Department of Water Resources.

TABLE B-1

GAGING STATION
ADDITIONS AND DISCONTINUATIONS

ADDITIONAL STATIONS

Panoche Drain near Dos Palos

(Under a cooperative agreement with the
Panoche Drainage District this station
was reactivated on September 27, 1964.)

DISCONTINUED STATIONS

Panoche Drain near Dos Palos

(Station discontinued July 2, 1963.)

PUBLICATION DISCONTINUED

Burkhardt Drain near Grayson

TABLE B-2

DAILY INFLOW
(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	B71121	MILLERTON LAKE AT FRIANT

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	D
1	1656	1226	1456	802	1077	806	1717	1752	2545	1744	1814	1817	
2	838	1259	2103	900	959	1143	1760	1676	2473	1763	1714	1994	
3	787	1240	1899	820	1094	1115	1789	1719	2324	1778	1803	1979	
4	920	1214	1973	711	973	1056	1751	1673	2393	1757	1874	2053	
5	374	1447	2027	770	1034	995	1360	1781	2423	1767	1812	1982	
6	809	1855	1983	963	836	999	1472	1726	2430	1735	1861	1900	
7	949	1693	1847	657	1010	721	1485	1738	2295	1821	1815	1853	
8	781	1692	1711	850	943	551	1247	1730	2464	1721	1823	1862	
9	827	1694	1765	936	867	1192	1308	1691	2500	1629	1796	1957	
10	780	1697	1703	978	840	1165	1411	1740	2399	1737	1931	1982	
11	1138	1685	1494	488	950	864	1741	1729	2400	1662	1842	1954	
12	609	1390	1689	452	908	1266	1735	1690	2461	1852	1881	1964	
13	694	1102	1667	689	1069	900	1742	1731	2503	1759	1911	1868	
14	831	1615	1484	768	826	695	1703	1716	2417	1796	1992	1793	
15	722	1754	1386	710	808	529	1731	1763	2458	1773	2114	1800	
16	741	1883	1339	735	538	906	1661	1692	2446	1799	1955	1655	
17	942	1921	1526	735	899	839	1758	1700	2349	1811	1971	1620	
18	894	1750	1570	931	1115	1147	1705	1699	2473	1747	2096	1551	
19	804	2045	1543	817	982	1247	1766	1711	2401	1769	2085	1324	
20	865	2034	1629	1343	947	1367	1720	1673	2380	1766	2045	1409	
21	1529	2108	1472	1372	999	1689	1700	1729	2500	1677	1990	1475	
22	1194	1890	1424	1063	936	1719	1726	1675	2466	1777	1903	1439	
23	1484	1966	1528	998	999	1640	1721	1697	2457	1765	2074	1782	
24	1316	1984	1536	1085	940	1797	1667	1729	2538	1744	1825	1612	
25	1222	1994	1097	784	939	1753	1666	1697	2484	1739	2047	1511	
26	1344	2013	1354	585	845	1737	1421	1812	2416	1730	2030	1367	
27	745	2035	1473	658	927	1109	1723	2740	2494	1802	2070	1452	
28	1302	1979	1501	1051	859	1423	1734	2469	2464	1728	1982	1410	
29	1352	1931	1393	921	504	1383	1704	2749	2076	1781	2037	1320	
30	1352	1071	1023	860		1464	1713	2451	1781	1760	1863	1535	
31	1421		740	940		1827		2355		1746	1899		
MEAN	1007	1706	1559	851	918	1195	1645	1853	2407	1756	1931	1707	
MAX.	1656	2108	2103	1372	1115	1827	1789	2749	2545	1852	2114	2053	
MIN.	374	1071	740	452	504	529	1247	1673	1781	1629	1714	1320	
AC. FT.	61990	101488	95871	52308	52806	73476	97741	113917	143226	107970	118721	101593	

E - ESTIMATED
NR - NO RECORD
* - DISCHARGE MEASUREMENT OR
OBSERVATION OF NO FLOW
- E AND °
a - 25-hour day
b - 23-hour day

MEAN
DISCHARGE
1545

MAXIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

MINIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

TOTAL
ACRE FEET
1121107

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 00 00	119 42 10	SW 5 11S 21E				OCT 41-DATE		1941		0.00	USCGS

Station located near center of Friant Dam on San Joaquin River, immediately above Cottonwood Creek, 0.9 mi. NE of Friant. Usable capacity, 503,000 ac.-ft. between elevations 375.4 and 578.0 ft. above mean sea level. Not available for release, 17,400 ac.-ft. Inflow to Friant Reservoir takes into account change in storage, release, spill, precipitation, and evaporation, and is representative of the natural flow which would pass the dam site if the dam had not been constructed. Figures shown under total discharge are computed inflow to the reservoir. Period of record for computed inflow is shown under period of record for discharge. Records furnished by U.S.B.R. Drainage area is 1,633 sq. mi.

TABLE B-3

DAILY CONTENT

(IN THOUSANDS OF ACRE-FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	871100	MILLERTON LAKE AT FRIANT

AY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	203.5	157.1	239.7	330.7	372.2	315.3	283.9	342.7	404.7	368.1	228.0	137.1	1
2	200.6	157.8	243.7	332.4	372.2	313.1	286.4	344.7	406.6	364.6	222.9	137.5	2
3	197.6	158.6	247.4	333.9	372.4	310.9	289.1	346.7	408.2	361.6	217.9	138.1	3
4	194.9	159.8	251.2	335.2	372.5	308.3	291.8	348.5	409.9	359.0	213.0	139.1	4
5	190.2	161.7	255.1	336.6	372.5	305.4	293.6	350.5	411.7	355.9	207.9	140.2	5
6	186.4	164.4	258.9	338.4	372.0	302.6	295.7	352.7	413.3	352.1	202.8	140.8	6
7	182.8	166.8	262.4	339.6	371.5	299.5	297.7	355.2	414.0	348.0	197.8	141.3	7
8	179.4	169.1	265.7	341.2	370.3	295.9	299.2	357.7	414.5	343.4	193.5	141.5	8
9	176.2	171.4	269.1	342.9	368.7	293.4	300.8	360.2	415.0	338.4	188.8	142.2	9
0	173.2	173.7	272.3	344.7	367.2	290.7	302.6	362.8	414.9	333.8	184.1	143.6	10
11	171.2	176.0	275.2	345.6	366.0	287.4	305.0	365.2	414.4	329.5	179.2	145.1	11
12	168.5	177.6	278.4	346.3	364.5	285.1	307.3	367.4	414.1	325.2	174.3	147.2	12
13	166.2	178.5	281.6	347.6	363.1	282.5	309.4	369.5	414.9	320.3	169.5	149.1	13
14	164.3	180.3	284.4	349.0	361.3	279.9	311.3	371.5	415.0	315.4	165.2	150.9	14
15	162.3	182.8	287.1	350.3	359.4	277.6	313.0	373.7	414.2	310.3	161.9	152.5	15
16	160.5	185.9	289.6	351.6	356.6	275.7	314.4	375.7	413.0	305.4	158.9	153.9	16
17	159.7	189.4	292.5	353.0	354.3	273.7	316.0	377.5	411.1	301.1	156.0	155.3	17
18	158.9	192.6	295.6	354.7	352.2	272.3	317.6	379.2	408.9	297.1	153.4	156.8	18
19	157.8	196.5	298.5	356.2	349.5	271.0	319.3	380.8	406.3	292.9	150.7	157.9	19
20	156.6	200.5	301.6	358.7	346.5	270.0	321.1	382.3	403.7	288.5	149.2	159.1	20
21	156.7	204.5	304.4	361.3	343.7	269.7	323.0	383.9	401.0	283.9	148.0	160.3	21
22	156.1	208.1	307.1	363.3	340.7	269.4	325.0	385.5	397.9	279.4	147.0	161.4	22
23	156.2	211.9	310.1	365.1	337.7	269.3	326.9	387.0	394.4	274.6	146.1	163.2	23
24	155.8	215.8	313.0	367.2	334.4	270.1	328.9	388.4	390.8	269.9	144.4	164.6	24
25	155.9	219.6	315.0	368.6	331.1	271.6	331.1	389.4	387.0	265.4	143.1	166.1	25
26	156.2	223.5	317.6	369.7	327.8	273.3	332.6	390.5	384.3	260.3	141.7	167.3	26
27	155.3	227.4	320.4	370.9	325.1	274.3	334.7	393.2	381.9	254.9	140.4	168.7	27
28	155.6	231.2	323.3	371.8	322.0	276.0	336.7	395.4	379.4	249.2	139.2	169.9	28
29	155.9	234.9	326.0	370.2	318.3	277.7	338.7	398.2	375.9	243.6	138.4	170.9	29
30	156.2	236.9	327.9	369.4		279.4	340.7	400.5	371.9	238.1	137.6	172.3	30
31	156.7		329.2	370.8		281.7		402.5		232.8	137.3		31
Monthly change	-48.3	+80.2	+92.3	+41.6	-52.5	-36.6	+59.0	+61.8	-30.6	-139.1	-95.5	+35.0	

— ESTIMATED
— NO RECORD
— DISCHARGE MEASUREMENT OR
OBSERVATION OF NO FLOW
— E AND *

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE FEET

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE		
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D. & B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO	
37 00 00	119 42 10	SW 5 11S 21E				OCT 41-DATE		1941		0.00 USCGS

Station located near center of Friant Dam on San Joaquin River, immediately above Cottonwood Creek, 0.9 mi. NE of Friant. Usable capacity, 503,000 ac.-ft. between elevations 375.4 and 578.0 ft. above mean sea level. Not available for release, 17,400 ac.-ft. Records furnished by U.S.B.R. Drainage area is 1,633 sq. mi.

TABLE B-4

DAILY MEAN DISCHARGE (IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	807885	SAN JOAQUIN RIVER BELOW FRIANT

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	D
1	90	62 *	51	51	49	91	76	113	126	151	166	134	
2	90	62	51	51	49	91	70	118	122	151	166	134	
3	88	62	52	51	49	88	73	120	118	151	166	134	
4	88	61	52	51	49	85	78	118	118	151	161	132	
5	88	62	52	50	48	84	78	118	118	149	176	126	
6	88	62	52	50	52	84	75	115	118	151	176	118	
7	85	62	52	50	57	84	70	111	116	146	176	118	
8	84	62	51	50	56	84	70	111	122	151	174	118	
9	82	62	51	51	57	84	78	113	126	157	174	118	
10	82	61	51	51	56	80	84	113	120	164	176	118	
11	78	61	51	51	56	76	88	113	117	169	176	118	
12	70	61	51	51	56	74	90	113	117	169	178	120	
13	70	61	51	51	55	70	90	113	115	166	174	120	
14	70	62	51	50	58	69	91	115	115	166	169	120	
15	69	63	51	50	63	69	96	117	117	166	169	122	
16	70	62	50	50	64	69	111	120	117	166	169	122	
17	70	62	50	49	67	69	115	120	122	166	169	122	
18	69	61	50	52	70	69	115	120	126	162	166	122	
19	68	61	50	54	73	69	117	122	126	160	164 *	122	
20	68	60	51	54	73	70	117	122	124	160	164	122	
21	70	54	51	57	73	70	117	122	124	160	164	122	
22	69	54	50	55	73	73	118	124	132	160	164	115	
23	68	54	50	50	73	67	117	124	138	164	164	108	
24	68 *	53	49	51	75	60	113	124	136	171	164	108 *	
25	68	53	49	51	74	58	109	124	140	171	164	108	
26	68	52 *	50	51	73	58	101	124	153	169	164	108	
27	67	51	50	52	87	61	102	124	153	169	164 *	109	
28	68	51	50	52	93 *	65	102	126	153	166	146	109	
29	68	52	51	51	93	67	102	126	153	166	136	109	
30	68	52	51	51		68	109	126	153	169 *	136	109 *	
31	64		51	50		75		126		166	138		
MEAN	74.6	58.6	50.7	51.3	64.5	73.6	95.7	119	128	161	166	119	
MAX.	90.0	63.0	52.0	57.0	93.0	91.0	120	126	153	171	181	134	
MIN.	64.0	51.0	49.0	49.0	48.0	58.0	70.0	111	115	146	136	108	
AC. FT.	4590	3490	3120	3150	3710	4520	5700	7330	7610	9920	10190	7070	

E - ESTIMATED
NR - NO RECORD
* - DISCHARGE MEASUREMENT OR
OBSERVATION OF NO FLOW
- E AND *

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE FEET
97.0	183	2.62	8	10	0800	48	1.89	2	5		70400

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B.&M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			CF5	GAGE HT.	DATE			FROM	TO		
36 59 04	119 43 24	SW7 11S 21E	77,200	23.8	12/11/37	OCT 07-DATE		1938	---	294.00	USGS

Station located 1 mile downstream from Friant Dam. Flow regulated by Millerton Lake.
Records furnished by U.S.G.S. Drainage area is 1,675 sq. mi.

TABLE B-4 (Cont.)

WATER YEAR	STATION NO.	STATION NAME
1964	895925	DELTA-MENDOTA CANAL NEAR TRACY

DAILY MEAN DISCHARGE (IN CUBIC FEET PER SECOND)

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	1666	644	105	141	1004	3291	1795	3302	3071	4353	4622	2285	1
2	1669	645	105	141	1004	2675	1828	3299	3069	4356	4592	2288	2
3	1671	646	105	141	934	2751	1823	3301	3064	4351	4585	2057	3
4	1904	538	106	142	862	2873	1822	3278	3195	4280	4446	2059	4
5	2278	467	106	142	863	2907	1895	2997	3348	4291	4450	1926	5
6	3314	287	106	141	865	2857	1931	2994	3505	4309	4341	1956	6
7	2276	286	105	141	863	2788	2181	2730	3507	4174	4333	1959	7
8	2280	286	105	142	932	2635	2315	2831	3501	4157	4426	1957	8
9	2280	321	105	140	1039	2306	2321	2833	3514	4151	4792	1955	9
10	2281	321	105	140	1040	2214	2320	3061	3414	4143	4394	2020	10
11	2286	322	140	206	1103	2217	2880	3064	3313	4148	4419	2086	11
12	2277	322	104	1218	1335	2128	4025	3068	3313	4152	4416	1925	12
13	3313	429	104	631	1335	1916	3098	3198	3311	4216	4413	1824	13
14	2279	430	140	618	1396	1912	3102	3220	3110	4300	4303	1822	14
15	2281	574	140	635	1473	1913	3365	3225	3372	4338	4309	1820	15
16	2280	681	105	420	1472	1912	3537	3207	3366	4435	4243	2123	16
17	2277	681	105	421	1405	1914	3700	3198	3365	4443	4184	2127	17
18	2279	681	105	422	1782	1908	3700	3203	3611	4532	3867	2124	18
19	2277	646	105	423	1846	1915	3765	2991	3667	4655	3849	2120	19
20	3320	647	105	425	1907	1980	3754	2994	3856	4640	3853	2121	20
21	2276	646	106	497	2105	2197	3822	3062	4016	4653	3958	2122	21
22	2251	608	105	497	2106	2197	3363	3161	3835	4633	3953	2178	22
23	1898	608	121	562	2106	1849	3317	3288	3867	4628	4160	2876	23
24	1557	609	105	639	2111	1508	3343	3292	3833	4641	3691	3121	24
25	1560	608	105	1190	2313	1503	3293	3262	4221	4601	3906	2991	25
26	1095	572	104	639	2264	1464	3291	3146	4319	4605	3709	3003	26
27	1053	572	104	1183	2263	1464	3295	2944	4364	4601	3581	2996	27
28	1027	212	104	1167	2264	1395	3172	2862	4442	4686	3411	2995	28
29	928	104	104	1185	2266	1395	3173	2810	4355	4696	3072	2859	29
30	928	105	104	934	1398	1398	3170	2910	4363	4709	2981	2790	30
31	789		105	934	1723	1723		3075		4577	2591		31
MEAN	1995	483	109	524	1526	2100	2947	3091	3636	4434	4060	2283	MEAN
MAX.	3320	681	140	1218	2313	3291	4025	3302	4442	4709	4792	3121	MAX.
MIN.	789	104	104	140	862	1395	1795	2730	3064	4143	2591	1820	MIN.
TOTAL	122765	28756	6690	32245	87784	129134	175059	190028	216371	272636	249620	135842	TOTAL

- ESTIMATED
- NO RECORD
- DISCHARGE MEASUREMENT OR OBSERVATION OF NO FLOW
- E AND *
- 25-hour day
- 23-hour day

MEAN
DISCHARGE
2266

MAXIMUM
DISCHARGE
GAGE HT.
MO.
DAY
TIME

MINIMUM
DISCHARGE
GAGE HT.
MO.
DAY
TIME

TOTAL
ACRE FEET
1646930

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 47 45	121 35 05	SW31 1S 4E				JUN 51-DATE		1951		0.00	USGS

Station located at Tracy Pumping Plant at intake to canal, 6 mi. SE of Byron, 10 mi. NW of Tracy. Discharge computed from records of operation of pumps. Water is diverted from Sacramento-San Joaquin Delta by way of Old River and a dredged channel to the Tracy Pumping Plant where it is lifted about 200 ft. into canal. Records furn. by U.S.B.R.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	800770	DELTA-MENDOTA CANAL TO MENDOTA POOL

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	1327	550	0.0	0.0	632	1907	1131	2212	2127	2718	2821	1511	
2	1180	450	0.0	0.0	632	2001	1224	2299	2114	2717	2823	1534	
3	1182	450	0.0	0.0	626	1948	1212	2214	2110	2688	2817	1550	
4	1223	425	0.0	0.0	517	1965	1340	2277	2106	2657	2798	1483	
5	1271	370	0.0	0.0	507	2124	1316	2174	2198	2634	2776	1482	
6	1344	250	0.0	0.0	472	2136	1311	1936	2354	2683	2737	1459	
7	1374	255	0.0	0.0	471	2068	1537	1820	2319	2675	2696	1472	
8	1359	245	0.0	0.0	471	1864	1692	1890	2345	2637	2739	1465	
9	1490	225	0.0	0.0	650	1730	1739	1914	2396	2593	2857	1400	
10	1489	225	0.0	0.0	650	1459	1728	2100	2391	2615	2907	1400	
11	1346	225	0.0	0.0	709	1448	2011	2079	2351	2587	2796	1387	
12	1152	230	0.0	652	912	1406	2388	2119	2279	2616	2811	1294	
13	1173	350	0.0	508	895	1168	2235	2154	2272	2608	2810	1197	
14	1065	364	0.0	447	866	1182	2209	2128	2180	2716	2798	1219	
15	1039	351	0.0	466	1042	1210	2341	2185	2230	2742	2790	1246	
16	1136	466	0.0	201	1042	1217	2398	2230	2370	2798	2780	1571	
17	1209	465	0.0	193	1017	1184	2627	2246	2392	2750	2767	1516	
18	1154	447	0.0	193	1154	1115	2617	2259	2427	2786	2762	1488	
19	1077	453	0.0	193	1257	1165	2630	2189	2464	2808	2563	1530	
20	1039	468	0.0	177	1281	1178	2627	2096	2660	2831	2481	1532	
21	1073	456	0.0	216	1524	1473	2602	2118	2638	2860	2495	1530	
22	1055	451	0.0	229	1519	1375	2348	2148	2709	2851	2544	1532	
23	937	383	0.0	352	1496	1275	2185	2282	2648	2866	2687	1685	
24	815	383	0.0	400	1509	918	2211	2263	2628	2852	2611	1820	
25	805	375	0.0	575	1617	972	2198	2289	2555	2845	2545	1780	
26	700	387	0.0	575	1635	975	2189	2195	2643	2844	2560	1763	
27	700	357	0.0	744	1624	956	2110	1999	2704	2836	2481	1660	
28	680	0.0	0.0	719	1624	955	2079	2002	2738	2846	2351	1690	
29	650	0.0	0.0	732	1655	963	2148	1996	2798	2857	2083	1711	
30	633	0.0	0.0	593		999	2135	2026	2739	2837	2110	1705	
31	600		0.0	632		1126		2149		2838	1781		
MEAN	1073	335	0.0	284	1035	1402	2017	2129	2430	2748	2632	1520	
MAX.	1490	550	0.0	744	1655	2136	2630	2299	2798	2866	2907	820	
MIN.	600	0.0	0.0	0.0	471	918	1131	1820	2106	2587	1781	1197	
AC. FT.	66062	19946		17449	59516	86206	119854	130885	144565	168974	161806	90470	

E - ESTIMATED
 NR - NO RECORD
 * - DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 H - E AND *

MEAN
DISCHARGE
1467

MAXIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

MINIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

TOTAL
ACRE FEET
1065733

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE		
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE
			C.F.S.	GAGE HT.	DATE			FROM	TO	
36 47 11	120 23 05	NW19 13S 15E								

Station-located approximately 2 mi. N of Mendota, where DMC crosses the Outside Canal, which is 0.8 mi. NW of Bass Avenue crossing (check No. 21). Flow measured by 3 Sparling meters located at siphon outlet.

Record furnished by U.S.B.R.

TABLE B-4 (Cont.)

WATER YEAR	STATION NO.	STATION NAME
1964	807710	SAN JOAQUIN RIVER NEAR MENDOTA

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	166	44	82	4.0	93	338	154	274	392	433	470	219	1
2	111	42	84	3.0	96	327	138	280	376	401	474	238	2
3	112	41	84	2.0	90	296	166	288	358	374	456	304	3
4	120	43	82	2.0	72	264	193	274	356	346	434	304	4
5	123	45	93	1.0	61	264	196	261	366	348	441	268	5
6	138	36	123	0.0	58	281	231	256	376	351	423	274	6
7	135	36	148	0.0	63	288	288	258	381	364	477	288	7
8	131	36	171	0.0	84	276	328	286	381	386	477	276	8
9	100	45	134	0.0	92	284	328	298	364	416	474	258	9
10	65	51	95	1.0	90	298	324	296	341	421	472	248	10
11	56	58	63	2.0	82	296	336	296	338	431	456	246	11
12	88	65	48	2.0	74	271	341	301	294	444	451	266	12
13	88	63	36	2.0	75	258	354	298	288	441	456	271	13
14	87	55	27	3.0	71	256	361	321	314	421	474	264	14
15	87	36	24	5.0	71	254	364	361	348	408	459	284	15
16	72	25	24	7.0	71	184	361	376	368	416	441	291	16
17	65	25	23	8.0	70	114	361	388	381	434	434	271	17
18	71	31	23	10	75	100	361	388	394	448	431	238	18
19	88	44	23	10	108	88	361	381	411	446	462	234	19
20	90	43	23	10	177	95	361	384	411	454	446	234	20
21	96	43	21	10	264	106	348	376	414	477	416	248	21
22	129	43	20	12	326	121	341	378	426	469	404	271	22
23	123	43	19	32	341	111	314	401	446	451	404	281	23
24	109	43	17	81	341	101	308	418	466	426	384	268	24
25	118	43	16	87	324	111	326	421	487	441	354	254	25
26	132	43	13	88	306	140	338	404	501	464	306	246	26
27	132	43	10	93	306	140	356	398	501	461	328	236	27
28	127	60	9.0	101	321	138	351	384	504	428	346	219	28
29	125	59	7.0	118	338	136	314	391	490	411	334	214	29
30	121	70	7.0	150	134	134	266	398	464	406	338	224	30
31	84		5.0	120	148	148		396		444	281		31
MEAN	106	45	50	31	157	201	306	343	398	421	419	258	MEAN
MAX.	168	70.0	171	150	341	338	364	421	504	477	477	304	MAX.
MIN.	56.0	25.0	5.0	0.0	58.0	88.0	138	256	288	346	281	214	MIN.
C.F.T.	6530	2690	3080	1910	9010	12330	18190	21080	23680	25910	25790	15350	C.F.T.

— ESTIMATED
 R — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 — E AND *

MEAN	MAXIMUM	MINIMUM	TOTAL
DISCHARGE 228	DISCHARGE GAGE HT. MO. DAY TIME	DISCHARGE GAGE HT. MO. DAY TIME	ACRE FEET 165550

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T.&R. M.D.&B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. OATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
36 48 37	120 22 35	SW 7 13S 15E	8840		6-1-52	OCT 39-DATE		1939		142.53	USBR

Station located 2.5 mi. below Mendota Dam, 4 mi. N. of Mendota. Records furnished by U.S.B.R. Drainage area is 4,310 sq. mi. This station equipped with DWR radio telemeter.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CU8IC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	867920	BIG CREEK DIVERSION NEAR FISH CAMP

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	D
1	2.1	3.6	11	7.7	9.6	8.2E	20	27	19	7.9	3.2	4.4	
2	2.3*	3.6	11	7.7	8.1	7.7E	18	24	18	7.7	3.1	2.5	
3	2.2	4.5	12	6.8	8.5	8.2E	18	22	17	8.4*	2.8	2.1	
4	2.2	5.1	12	6.7	8.1	8.4E	19	22	16	7.7	3.0*	1.9*	
5	2.3	17	11	6.4	8.6	8.2E	18	20	16	7.5	3.0	1.6	
6	2.2	26 *	4.5*	7.1*	8.7	8.4*	17	21	15	7.5	2.8	1.5	
7	2.2	11	4.6	7.2	8.4*	7.4	18	25	17	7.3	2.7	1.5	
8	2.0	12	12	6.5	8.5	7.8	20	25	20	6.9	2.7	1.4	
9	2.2	9.7	13	6.2	8.6	8.4	23	29	23	6.2	2.5	1.4	
10	2.1	8.0	12	6.0	8.6	7.9	26	32	21	6.3	2.5	1.5	
11	9.0	7.3	11	6.3	8.5	8.0	29	34	23	6.1	2.5	1.4	
12	4.7	7.0	12	6.6	7.8	17	32	36	22	5.7	2.2	1.3	
13	3.8	6.7	12	10	8.1	29	35	36	19	5.4	2.1	1.4	
14	3.2	11	12	14	8.1	9.1	37	36	17	5.2	2.0	1.4	
15	2.9	14	11	18	7.9	12	37	35	16	5.0	2.0	1.3	
16	3.3	12	9.8	22	7.7	12	38	34	15	5.1	2.0	1.2	
17	3.6	12	9.4	21	7.5	14	37	33	15	4.7	1.9	1.1	
18	3.4	11	8.8	30	7.8	16	33	33	14	4.5	1.9	1.3	
19	3.5	11	8.8	23	8.2	17	29	32	14	4.5	1.9	1.4	
20	3.5	12	8.8	6.6	8.0E	18	27	31	13	4.8	1.8	1.3	
21	3.7	12	8.6	5.3	8.8E	16	28	28	12	4.5	1.7	1.3	
22	2.4	12	8.3	22	8.4E	13	29	26	11	4.1	1.5	1.3	
23	3.9	12	8.5	51	8.4E	12	28	25	11	3.9	1.7	1.3	
24	4.2*	12	8.0	56	8.4E	14	24	24	11	3.9	1.5	1.1	
25	5.0	12	7.9	54	8.2E	13	23	24	10	3.7	1.5	1.1	
26	4.7	12	7.8	48	7.8E	15	24	25	9.2	3.5	1.4	1.4	
27	4.2	11	8.1	40	7.8E	16	27	27	9.1	3.8	1.4	1.4	
28	4.2	11	7.7	41	8.0E	17	29	24	9.0	4.0	1.4	1.6	
29	3.9	11	7.7	41	8.0E	18	29	23	8.5	3.5	1.4	1.6	
30	5.5	11	7.7	35		20	28	22	8.2	3.5	1.3	1.6	
31	4.3		7.7	24		21		20		3.3	3.4		
MEAN	3.5	10.7	9.5	20.7	8.2	13.2	26.7	27.6	15.0	5.4	2.2	1.6	
MAX.	9.0	26.0	13.0	56.0	9.6	29.0	38.0	36.0	23.0	8.4	3.4	4.4	
MIN.	2.0	3.6	4.5	5.3	7.5	7.4	17.0	20.0	8.2	3.3	1.3	1.1	
AC. FT.	216	636	585	1276	474	809	1587	1696	891	329	132	92	

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # — E AND *

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE FEET
12.0	66.0	1.85	3	13	1020	0.0		10	22	0940	8722

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T.&R. M.D.B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 28 10	119 36 52	NE25 5S 21E	150	3.58	1-30-63	DEC 58-DATE		1958		0.00	LOCAL

Station located 195 ft. above road culvert pipe, 1.4 mi. SE of Fish Camp. This is regulated diversion from Big Creek to Lewis Fork, Fresno River. Stage-discharge relationship at times affected by ice and extreme high flows affected by culvert pipe below station.
 Maximum discharge determined from slope area survey and maximum capacity of culvert pipe below station.
 Altitude of gage is approximately 5,400 ft. (from topographic map)

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	867325	LEWIS FORK FRESNO RIVER NEAR OAKHURST

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	6.8	15	35	20	26	26	95	73	52 E	23	9.0	9.6	1
2	5.6*	14	33	20	26	29	75	65	50 E	21	6.3	4.4	2
3	5.2	18	32	18	26	25	62	63	48 E	22 *	4.3	3.5	3
4	5.7	18	30	19	25	29	60	63	45 #	22	2.3#	3.4#	4
5	6.0	28	28	18	26	28 *	59	64	44	22	1.8E	3.0E	5
6	6.9	101 *	27 *	21 *	26	26	52 *	65 *	48	22	3.0E	3.0E	6
7	7.1	34	20	20	26	27	49	64	49	21	3.0E	3.1E	7
8	6.5	25	29	18	25	26	50	65	54	19	2.5E	3.1E	8
9	8.8	26	36	19	25	28	57	70	79	19	2.5E	3.0E	9
10	7.2	20	27	18	24 *	27	66	79	66	18	2.7E	2.7E	10
11	24	18	26	19	22	26	70	86	67	16	2.7E	2.6E	11
12	24	17	26	19	21	36	76	93	68	16	2.7E	2.6	12
13	16	18	28	17	21	34	82	88	60	16	2.5E	2.7	13
14	14	27	26	18	21	32	86	86	53	17	2.5E	2.5*	14
15	13	150	26	16	22	36	87	87	49	16	2.7E	2.4	15
16	13	52	24	18	21	36	87	86	45	14	2.5E	3.0	16
17	14	37	24	19	21	37	84	81	45	12	2.0E	1.8	17
18	14	34 *	24	21	22	41	81	79	43	13	1.8E	2.0	18
19	14	45	23	19	22	44	76	83	41	12	2.3E	2.6	19
20	14	137 *	24	18	23	45	67	86	39	12	2.6#	3.4	20
21	13	65	21	31	23	46	67 *	84	33	13	1.6E	2.9	21
22	13	45	20	17	25	41	68	79	32	10	1.3	2.4	22
23	12	59	22	24	25	35	70	78	29	11	1.6	2.4	23
24	14	78	18	27	24	43	60	75	28	10	1.8*	1.9	24
25	14	50	17	28	26	39	60	67 E	25	8.7	1.2	1.8	25
26	14	43	19	29	24	44	58	66 E	24	9.6	1.0	1.6	26
27	13	42	19	27	24	48	63	63 E	23	9.4	1.1	2.3	27
28	12	39	19	27	24	52	76	61 E	22	11	1.1	2.7	28
29	12	37	19	26	24	53	73	58 #	23	8.7	1.4	2.3	29
30	15	36	19	27		55	71	55 E	24	10	1.4	2.6	30
31	16		19	25		56		54 E		9.9	2.4		31
AN	12.1	44.3	24.5	21.4	23.8	37.1	69.6	73.1	43.6	15.0	2.5	2.9	MEAN
AX.	24.0	150	36.0	31.0	26.0	56.0	95.0	93.0	79.0	23.0	9.0	9.6	MAX.
IN.	5.2	14.0	17.0	16.0	21.0	25.0	49.0	54.0E	22.0	8.7	1.0	1.6	MIN.
FT.	741	2634	1507	1315	1369	2281	4140	4495	2594	921	154	173	AC.FT.

— ESTIMATED
 — NO RECORD
 — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 — E AND *

MEAN DISCHARGE
30.8

MAXIMUM				
DISCHARGE	GAGE HT.	MD.	DAY	TIME
383	2.25	11	15	0620

MINIMUM				
DISCHARGE	GAGE HT.	MD.	DAY	TIME
0.3	0.78	9	24	1830

TOTAL ACRE FEET
22320

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 20 44	119 38 20	SE 2 7S 21E	2930E	493	2- 1-63	SEP 61-DATE		1961	DATE	0.00	LOCAL

Station located 1.6 mi. N. of Oakhurst on Highway 41, 500 ft. downstream from White Oaks Motel.
 Station located on left bank above concrete weir. Altitude of gage is approximately 2,520 ft.
 (from topographic map.)

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	867300	MIAMI CREEK NEAR OAKHURST

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	D
1	0.9	1.8	5.0	2.9	4.0	3.7	19	5.1	2.1	0.7	0.8	0.6	
2	0.9*	1.8	4.7	2.8	4.0	4.0	13	5.3	2.2	1.0	0.8	0.5	
3	1.0	2.1	4.5	2.7	3.9	3.7	11	5.3	2.4	1.6*	0.7	0.5	
4	1.0	2.2	4.3	2.7	4.0	3.6	9.8	5.6	2.4*	1.7	0.7*	0.5	
5	1.1	4.1	3.9	2.7	4.3	3.7	0.1	5.9	2.5	1.7	0.7	0.5	
6	1.1	19 *	4.0*	2.7*	4.3	3.6*	8.5*	6.7*	2.5	1.7	0.6	0.4	
7	1.1	6.2	4.2	2.8	4.1*	3.7	8.1	6.6	2.7	1.5	0.7	0.4	
8	1.1	4.7	4.0	2.8	4.1	4.0	8.3	7.5	3.1	1.5	0.6	0.3	
9	1.1	4.4	4.8	2.8	4.1	3.5	8.6	8.1	7.2	1.4	0.5	0.3	
10	1.1	4.1	4.3	2.7	4.2	3.8	8.4	8.0	5.1	1.4	0.4	0.3	
11	4.9	3.7	4.1	3.0	4.2	3.7	8.4	7.3	4.2	1.2	0.4	0.3*	
12	3.4	3.4	4.1	2.9	4.0	4.7	8.4	6.3	3.3	1.2	0.5	0.3	
13	2.4	3.2	3.9	3.0	3.9	4.4	8.3	5.7	3.0	1.1	0.5	0.3	
14	2.1	5.3	4.0	3.0	4.2	4.4	7.9	5.2	2.7	1.1	0.5	0.3	
15	2.8	32	3.9	2.9	3.7	4.9	7.8	3.9	2.7	1.1	0.5	0.3	
16	2.2	9.2	3.9	3.3	3.6	5.4	7.3	3.7	2.7	1.1	0.4	0.3	
17	2.0	6.1	3.6	2.9	3.5	5.4	7.0	3.8	2.7	1.1	0.3	0.3	
18	1.7	5.0	3.7	4.3	3.5	5.8	6.4	3.9	2.5	1.0	0.4	0.3	
19	1.7	8.1	3.6	3.8	3.6	5.8	6.4	4.0	2.4	1.5	0.4	0.3	
20	1.8	33 *	3.8	3.6	3.6	5.9	6.1	3.7	2.4	1.4	0.4	0.3	
21	1.8	13	3.6	5.1	3.7	5.8	5.9*	3.6	2.3	1.2	0.3	0.3	
22	1.7	8.5	3.3	3.1	3.8	5.5	5.7	3.6	2.3	1.1	0.3	0.3	
23	1.6	9.8	3.1	4.2	3.8	5.3	5.7	3.4	2.4	1.0	0.3	0.3	
24	1.7	15	3.0	4.5	3.8	5.3	5.8	3.2	2.3	0.9	0.3	0.3	
25	1.7	8.7	2.9	4.7	3.7	6.4	5.8	3.2	2.2	0.9	0.3	0.3	
26	1.8	7.0	2.8	4.3	3.5	6.7	5.5	3.5	2.1	0.9	0.3	0.3	
27	1.8	6.3	2.7	4.3	3.4	7.6	5.3	3.6	2.1	0.9	0.3	0.3	
28	1.7	6.0	2.7	4.0	3.6	8.8	5.1	3.8	2.1	0.8	0.2	0.3	
29	1.6	5.2	2.8	4.0	3.6	9.4	5.1	3.4	2.0	0.9	0.3	0.4	
30	1.9	5.2	2.7	4.1		9.3	5.1	3.0	1.8	0.8	0.3	0.4	
31	1.8		2.8	4.1		9.7		2.3		0.8	0.5		
MEAN	1.8	8.1	3.7	3.4	3.9	5.4	7.8	4.8	2.7	1.2	0.5	0.4	
MAX.	4.9	33.0	5.0	5.1	4.3	9.7	19.0	8.1	7.2	1.7	0.8	0.6	
MIN.	0.9	1.8	2.7	2.7	3.4	3.5	5.1	2.3	1.8	0.7	0.2	0.3	
AC. FT.	108	484	228	212	222	332	462	294	163	72	28	21	

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # — E AND *

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE FEET
3.6	68.0	4.21	11	15	0610	0.2	2.41	8	17	1640	2625

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T.&R. M.O.B.&M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 23 38	119 39 10	SE22 6S 21E	1140E	9.08	2- 1-63	DEC 59-DATE		1959	Date	0.00	

Station located 150 ft. below bridge, 4.5 mi. N. of Oakhurst. Tributary to Fresno River. Stage-discharge relationship at times affected by ice. Drainage area is 10.6 sq. mi. Recorder installed December 15, 1959. Altitude of gage is approximately 3,500 ft. (from topographic map.)

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	807610	SAN JOAQUIN RIVER NEAR DOS PALOS

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0.0	0.0	0.0	11	1.0	0.0	0.0	0.0	0.0	12	0.0	0.0	1
2	0.0	0.0	0.0	11	1.0	0.0	0.0	0.0	9.0	12	0.0	0.0	2
3	0.0	0.0	0.0	11	0.0	0.0	0.0	0.0	12	4.0	0.0	0.0	3
4	0.0	0.0	0.0	11	0.0	0.0	0.0	0.0	12	0.0	0.0	0.0	4
5	0.0	0.0	0.0	11	8.0	0.0	0.0	0.0	12	0.0	0.0	0.0	5
6	0.0	0.0	0.0	11	12	0.0	0.0	8.0	12	0.0	0.0	0.0	6
7	0.0	0.0	0.0	11	12	0.0	0.0	12	4.0	0.0	0.0	0.0	7
8	0.0	0.0	0.0	11	12	0.0	0.0	4.0	0.0	0.0	0.0	0.0	8
9	0.0	0.0	0.0	11	12	0.0	0.0	0.0	0.0	0.0	0.0	8.0	9
10	0.0	0.0	0.0	9.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	10
11	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.0	11
12	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	12
13	0.0	0.0	0.0	8.0	0.0	0.0	0.0	5.0	6.0	0.0	0.0	0.0	13
14	0.0	0.0	0.0	8.0	8.0	0.0	0.0	12	0.0	0.0	0.0	4.0	14
15	0.0	0.0	0.0	8.0	4.0	0.0	0.0	8.0	0.0	9.0	0.0	0.0	15
16	0.0	0.0	0.0	7.0	0.0	0.0	5.0	0.0	0.0	12	0.0	0.0	16
17	0.0	0.0	0.0	11	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	17
18	0.0	0.0	0.0	18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18
19	0.0	0.0	0.0	21	4.0	0.0	0.0	0.0	9.0	0.0	9.0	0.0	19
20	0.0	0.0	0.0	18	8.0	3.0	0.0	0.0	10	0.0	12	0.0	20
21	0.0	0.0	0.0	11	0.0	0.0	0.0	0.0	0.0	0.0	12	0.0	21
22	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	22
23	0.0	0.0	0.0	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23
24	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24
25	0.0	0.0	0.0	1.0	3.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	25
26	0.0	0.0	0.0	1.0	5.0	0.0	0.0	0.0	0.0	7.0	0.0	0.0	26
27	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	27
28	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	28
29	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	2.0	9.0	0.0	5.0	29
30	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	12	4.0	0.0	4.0	30
31	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0		0.0	0.0		31
MEAN	0.0	0.0	0.0	8.8	3.4	0.1	0.5	1.6	3.6	2.5	1.6	0.8	MEAN
MAX.	0.0	0.0	0.0	21.0	12.0	3.0	5.0	12.0	12.0	12.0	12.0	8.0	MAX.
MIN.	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	MIN.
AC. FT.				540	196	6	28	99	214	155	97	50	AC. FT.

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 H — E AND *

MEAN
DISCHARGE
1.9

MAXIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

MINIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

TOTAL
ACRE FEET
1385

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE		
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO	
36 59 38	120 30 02		8200		6-5-52	OCT 40-DATE		1940		116.5 USED

Station located 800 ft. below the head of Temple Slough, 6.5 mi. E of Dos Palos. Records furn. by U.S.B.R.
 Drainage area is approx. 5,630 sq. mi.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	864400	EAST FORK CHOWCHILLA RIVER NEAR AHWAHNEE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0.5	3.7	20	8.2	34	10	74	18	8.9	2.2	0.0	0.0	1
2	0.5	3.4	16	7.7	31	15	65	20	8.3	2.1	0.0	0.0	2
3	0.5	3.7	14	8.2	28	13	44	19	7.8	1.5	0.0*	0.0	3
4	0.5	4.2	13	8.5	25	11	35	21	7.6	1.5	0.0	0.0	4
5	0.6	4.9	11	8.5	25	11	32	24	7.1*	1.5	0.0	0.0	5
6	0.7	4.9	11	8.2	26	E	11	30	3.8	1.4	0.0	0.0	6
7	1.1	23	10	8.5	24	E	12	26	6.9	1.2	0.0	0.0	7
8	1.2	13	11	8.6*	23	E	11	24	9.1	1.1*	0.0	0.0	8
9	1.3	9.5	15	7.4	22	E	10	24	19	1.1	0.0	0.0	9
10	1.3	9.0	16	8.2	20	E	10	23	16	1.0	0.0	0.0	10
11	6.8	9.0	12	8.2	19	E	10	21	11	0.8	0.0	0.0	11
12	10	8.7	11	8.2	19	E	21	23	9.0	0.8	0.0	0.0	12
13	4.3	7.9	11	8.2	18	E	24	21	7.9	0.6	0.0	0.0	13
14	3.2	9.4	11	8.2	17	E	17	21	18	0.4	0.0	0.0	14
15	2.8	132	10	7.7	16	E	16	18	5.9	0.3	0.0	0.0	15
16	3.2	44	9.3	7.7	16	E	15	18	6.3	0.2	0.0	0.0	16
17	3.4	27	9.3	7.7	15	E	14	17	5.9	0.3	0.0	0.0	17
18	3.2	22	9.3	13	15	E	13	15	5.7	0.2	0.0	0.0	18
19	3.2	28	9.3	15	13	E	13	19	5.2	0.2	0.0	0.0	19
20	3.2	267	8.2	12	12	12	20	14	4.8	0.2	0.0	0.0	20
21	3.2	87	8.2	34	12	12	18	14	4.5	0.3	0.0	0.0	21
22	3.4	49	8.2	69	13	14	18	14	4.3	0.2	0.0	0.0	22
23	3.4*	44	8.5	35	13	32	18	13	3.9	0.2	0.0	0.0	23
24	3.4	84	8.7	29	12	39	25	12	3.3	0.2	0.0	0.0	24
25	3.4	46	8.7	27	12	30	21	11	2.9	0.1	0.0	0.0	25
26	3.4	34	8.7	30	12	40	20	12	2.7	0.1	0.0	0.0	26
27	3.4	28	8.7	35	11	45	19	12	2.5	0.1	0.0	0.0	27
28	3.2	26	8.5	34	10	40	18	15	2.5	0.1	0.0	0.0	28
29	3.3	23	8.5	36	11	35	18	13	2.3	0.1	0.0	0.0	29
30	3.2	19	8.5	37	29	29	17	11	2.6	0.0	0.0	0.0	30
31	3.2		7.9	35	27	27		9.9		0.0	0.0	0.0	31
MEAN	2.8	37.3	10.7	18.7	18.1	19.7	25.4	18.6	6.6	0.6	0.0	0.0	MEAN
MAX.	10.0	267	20.0	69.0	34.0	45.0	74.0	38.0	19.0	2.2	0.0	0.0	MAX.
MIN.	0.5	3.4	7.9	7.4	10.0	10.0	16.0	9.9	2.3	0.0	0.0	0.0	MIN.
AC. FT.	175	2218	656	1148	1039	1214	1509	1146	391	40			AC. FT.

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # — E AHD *

MEAN
DISCHARGE
13.1

MAXIMUM			
DISCHARGE	GAGE HT.	MO.	DAY
524	5.82	11	20
			0310

MINIMUM			
DISCHARGE	GAGE HT.	MO.	DAY
0.0		7	29
			1940

TOTAL
ACRE FEET
9537

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 20 09	119 48 59	SE 7 7S 20E	3710E	10.34	1-31-63	NOV 57-DATE		1957	Date	0.00	LOCAL

Station located 1.1 mi. above mouth, 5.5 mi. W of Ahwahnee. Drainage area 57.8 sq. mi.
 Altitude of gage 980 ft. (from topographic map.)

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE
(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	864300	WEST FORK CHOWCHILLA RIVER NEAR MARIPOSA

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0.0	0.2	3.7	2.8	15	4.8	51	2.7	0.7	0.0	0.0	0.0	1
2	0.0	0.2	3.6	2.9	13	8.5	35	2.9	0.6	0.0	0.0	0.0	2
3	0.0	0.3	3.3	2.7	11	5.8*	21 *	3.5	0.5	0.0	0.0*	0.0	3
4	0.0	0.3	3.4	2.7	9.0	4.7	14	4.3	0.5	0.0	0.0	0.0	4
5	0.0	0.8	3.4*	2.7	8.8*	4.1	12	4.3	0.4*	0.0	0.0	0.0	5
6	0.0	11 *	3.4	2.7	8.3	4.3	10	12 *	0.4	0.0	0.0	0.0	6
7	0.0	4.0	3.5	2.8	7.3	4.7	8.1	7.8	0.6	0.0	0.0	0.0	7
8	0.0	2.1	3.5	2.9*	7.4	4.2	7.6	4.6	0.7	0.0	0.0	0.0*	8
9	0.0	1.6	6.3	2.7	7.3	3.8	6.9	3.7	1.3	0.0	0.0	0.0	9
10	0.0	1.3	6.3	2.7	7.0	3.8	6.3	3.2	1.2	0.0	0.0	0.0	10
11	0.3	1.1	4.3	2.7	6.3	3.8	5.8	2.9	0.9	0.0	0.0	0.0	11
12	0.1	1.0	3.6	2.5	6.0	9.6	4.9	2.5	0.7	0.0	0.0	0.0	12
13	0.1	0.9	3.4	2.5	5.7	11	4.7	2.3	0.5	0.0	0.0	0.0	13
14	0.0	2.2	3.3	2.6	5.5	5.9	4.5	2.0	0.4	0.0	0.0	0.0	14
15	0.0	84	3.3	2.6	5.4	5.0	4.2	1.9	0.3	0.0	0.0	0.0	15
16	0.1	7.4	3.1	2.5	5.2	4.4	4.1	1.8	0.3	0.0	0.0	0.0	16
17	0.1	3.2	2.9	2.6	5.0	3.8	3.8	1.6	0.3	0.0	0.0	0.0*	17
18	0.1	2.1	2.9	5.0	5.1	3.7	3.8	1.5	0.3	0.0	0.0	0.0	18
19	0.1	5.4	2.9	5.2	5.0	3.3	4.9	1.6	0.2	0.0	0.0	0.0	19
20	0.1	126 *	2.9	4.4	5.1	3.1	4.6	1.4	0.2	0.0	0.0	0.0	20
21	0.1	29	3.0	15	4.8	2.9	4.0	1.3	0.2	0.0	0.0	0.0	21
22	0.1	8.0	3.1	66	4.6	4.4	3.7	1.3	0.1	0.0	0.0	0.0	22
23	0.1*	8.9	3.0	31	4.6	17	3.6	1.1	0.1	0.0	0.0	0.0	23
24	0.1	30	2.8	22	4.6	31	3.7	1.0	0.1	0.0	0.0	0.0	24
25	0.2	11	2.8	18	4.7	28	3.4	1.0	0.1	0.0	0.0	0.0	25
26	0.2	6.9	2.8	22	4.8	34	3.3	1.2	0.0	0.0	0.0	0.0	26
27	0.2	5.5	2.8	28	4.8	38	3.2	1.3	0.0	0.0	0.0	0.0	27
28	0.2	4.7	2.8	22	4.9	32	3.0	1.3	0.0	0.0	0.0	0.0	28
29	0.2	4.1	2.8	22	4.8	23	2.9	1.1	0.0	0.0	0.0	0.0	29
30	0.2	3.9	2.8	22	16	2.7	2.7	0.9	0.0	0.0	0.0	0.0	30
31	0.2		2.8	18	14			0.8	0.0	0.0	0.0	0.0	31
AN	0.1	12.2	3.4	11.2	6.6	11.1	8.4	2.6	0.4	0.0	0.0	0.0	MEAN
AX.	0.3	126	6.3	66.0	15.0	38.0	51.0	12.0	1.3	0.0	0.0	0.0	MAX.
IN.	0.0	0.2	2.8	2.5	4.6	2.9	2.7	0.8	0.0	0.0	0.0	0.0	MIN.
FT.	6	728	207	687	379	680	497	160	23				AC.FT.

— ESTIMATED
— NO RECORD
— DISCHARGE MEASUREMENT OR
OBSERVATION OF NO FLOW
— E AND *

MEAN DISCHARGE
4.6

MAXIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME
270	4.97	11	15	0620

MINIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME
0.0		10	1	0000

TOTAL ACRE FEET
3367

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE		
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE
			C.F.S.	GAGE HT.	DATE			FROM	TO	
37 25 14	119 52 25	SE10 6S 19E	3590E	8.67	4- 3-58	NOV 57-DATE		1957		0.00
										LOCAL

Station located 15 ft. below Indian Peak Road Bridge, 6.7 mi. SE of Mariposa. Drainage area is 33.6 sq. mi. Altitude of gage is 1,680 ft. (from topographic map.)

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	B64360	MIDDLE FORK CHOWCHILLA RIVER NEAR NIPPINAWASEE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0.1	0.3	3.2	1.9	12	3.1	29	2.5	0.7	0.2	0.0	0.0	1
2	0.1	0.3	3.2	1.9	10	5.0	20	2.5	0.6	0.1	0.0	0.0	2
3	0.1	0.3	3.1	1.9	8.7	4.0*	12 *	2.6	0.6	0.2	0.0*	0.0	3
4	0.2	0.4	2.9	1.9	7.0	3.5	9.0	2.9	0.5	0.1	0.0	0.0	4
5	0.2	0.4	2.8*	1.9	6.5*	3.2	7.7	3.2	1.5*	0.1	0.0	0.0	5
6	0.2	5.4*	2.7	1.9	6.0	3.2	7.1	6.2*	0.4	0.1	0.0	0.0	6
7	0.2	2.8	2.5	1.9	5.2	3.2	6.2	6.5	0.5	0.2	0.0	0.0	7
8	0.2	1.7	2.5	1.9*	4.8	3.0	5.5	4.2	0.5	0.1*	0.0	0.0*	8
9	0.3	1.4	3.7	1.9	4.6	2.7	5.2	3.4	0.8	0.1	0.0	0.0	9
10	0.3	1.1	4.1	1.8	4.4	2.7	4.8	3.0	1.3	0.1	0.0	0.0	10
11	0.7	0.9	3.1	1.7	4.3	2.7	4.5	2.8	1.2	0.1	0.0	0.0	11
12	0.9	0.8	2.9	1.7	4.1	6.2	4.7	2.5	1.1	0.0	0.0	0.0	12
13	0.6	0.7	2.5	1.6	3.7	8.5	4.4	2.3	0.8	0.0	0.0	0.0	13
14	0.4	1.4	2.3	1.6	3.6	4.6	3.9	1.9	0.7	0.0	0.0	0.0	14
15	0.3	30	2.3	1.6	3.5	3.7	3.7	1.8	0.5	0.0	0.0	0.0	15
16	0.5	5.8	2.3	1.6	3.6	3.5	3.6	1.7	0.5	0.0	0.0	0.0	16
17	0.5	3.0	2.2	1.5	3.5	3.1	3.4	1.5	0.5	0.0	0.0	0.0*	17
18	0.5	2.4	2.1	2.4	3.4	3.1	3.3	1.5	0.6	0.0	0.0	0.0	18
19	0.5	3.0	2.0	3.5	3.3	2.9	3.9	1.4	0.5	0.0	0.0	0.0	19
20	0.5	103 *	1.9	2.8	3.4	2.9	4.0	1.3	0.4	0.0	0.0	0.0	20
21	0.5	16	2.0	7.7	3.2	2.7	3.6	1.1	0.4	0.0*	0.0	0.0	21
22	0.5	6.8	2.0	14	3.2	3.6	3.3	1.1	0.3	0.0	0.0	0.0	22
23	0.5*	6.4	1.9	9.9	3.1	7.7	3.3	1.2	0.3	0.0	0.0	0.0	23
24	0.4	16	1.9	7.8	3.1	10	3.6	1.0	0.2	0.0	0.0	0.0	24
25	0.4	8.1	1.9	7.5	3.1	8.7	3.3	0.9	0.2	0.0	0.0	0.0	25
26	0.4	5.7	1.9	9.0	3.1	16	2.9	0.9	0.1	0.0	0.0	0.0	26
27	0.4	4.5	1.9	12	2.9	23	2.8	1.0	0.1	0.0	0.0	0.0	27
28	0.3	4.0	1.9	11	2.8	19	2.8	1.2	0.1	0.0	0.0	0.0	28
29	0.3	3.6	1.9	12	3.0	12	2.7	1.1	0.1	0.0	0.0	0.0	29
30	0.3	3.3	1.9	13		8.5	2.6	0.9	0.1	0.0	0.0	0.0	30
31	0.3		1.9	12		7.2		0.8		0.0	0.0	0.0	31
MEAN	0.4	8.0	2.4	5.0	4.6	6.2	5.9	2.2	0.5	0.0	0.0	0.0	MEAN
MAX.	0.9	103	4.1	14.0	12.0	23.0	29.0	6.5	1.3	0.2	0.0	0.0	MAX.
MIN.	0.1	0.3	1.9	1.5	2.8	2.7	2.6	0.8	0.1	0.0	0.0	0.0	MIN.
AC. FT.	23	475	150	307	264	383	351	133	30	3			AC. FT.

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # — E AND *

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE FEET
2.9	217	4.43	11	20	0510	0.0		7	12	2400	2118

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO DN GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 22 56	119 50 11	NE25 6S 19E	1280	10.10	2- 1-63	MAR 58-DATE		1958	Date	0.00	LOCAL

Station located 6 mi. W of Nipinnawasee, 10 mi. SE of Mariposa. Tributary to East Fork Chowchilla River. Drainage area is 12.3 sq. mi. Altitude of gage is 1,520 ft. (from topographic map.)

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	864260	STRIPED ROCK CREEK NEAR RAYMOND

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0.0	0.2	1.4	0.7	1.9	0.9	8.6	1.0	0.1	0.0	0.0	0.0	1
2	0.0	0.2	1.1	0.7	1.8	1.9	5.5	1.3	0.0	0.0	0.0	0.0	2
3	0.0	0.2	1.2	0.6	1.6	1.0*	3.9*	1.5	0.1	0.0	0.0*	0.0	3
4	0.0*	0.2	1.0	0.5	1.5	0.7	2.8	1.9	0.0	0.0	0.0	0.0	4
5	0.0	0.3	1.0*	0.6	1.5*	0.6	3.1	2.3	0.1*	0.0	0.0	0.0	5
6	0.0	1.1*	0.8	0.5	1.4	0.7	2.7	3.9*	0.0	0.0	0.0	0.0	6
7	0.0	0.5	0.7	0.5	1.3	0.8	2.3	2.2	0.1	0.0	0.0	0.0	7
8	0.0	0.3	0.9	0.5*	1.2	0.7	2.3	1.4	0.1	0.0	0.0	0.0*	8
9	0.0	0.3	1.6	0.4	1.2	0.7	2.5	1.2	0.3	0.0	0.0	0.0	9
10	0.0	0.3	1.6	0.4	1.1	0.6	2.2	1.0	0.2	0.0	0.0	0.0	10
11	0.7	0.2	0.9	0.5	1.1	0.6	2.2	0.8	0.1	0.0	0.0	0.0	11
12	0.2	0.2	0.8	0.4	1.1	2.0	2.0	0.7	0.1	0.0	0.0	0.0	12
13	0.1	0.3	0.8	0.4	1.2	1.9	1.9	0.6	0.0	0.0	0.0	0.0	13
14	0.1	0.8	0.7	0.3	1.2	1.0	1.9	0.5	0.0	0.0	0.0	0.0	14
15	0.1	6.6	0.7	0.4	1.2	0.8	1.8	0.4	0.0	0.0	0.0	0.0	15
16	0.4	1.0	0.8	0.4	1.2	0.8	1.7	0.3	0.0	0.0	0.0	0.0	16
17	0.2	0.5	0.8	0.8	1.0	0.8	1.5	0.3	0.0	0.0	0.0	0.0*	17
18	0.2	0.4	0.8	1.4*	1.0	0.8	1.4	0.3	0.0	0.0	0.0	0.0	18
19	0.1	0.8	0.7	1.0	0.9	0.7	2.0	0.2	0.0	0.0	0.0	0.0	19
20	0.1	2.4	0.8	0.7	1.0	0.7	2.2	0.2	0.0	0.0*	0.0	0.0	20
21	0.1	6.4	0.8	2.3	0.9	0.8	1.8	0.2	0.0	0.0	0.0	0.0	21
22	0.1	2.5	0.7	21	0.8	1.4	1.6	0.2	0.0	0.0	0.0	0.0	22
23	0.1	3.0	0.7	9.4	0.8	6.0	1.5	0.2	0.0	0.0	0.0	0.0	23
24	0.1	5.9	0.6	5.3	0.8	13	1.4	0.1	0.0	0.0	0.0	0.0	24
25	0.1	3.1	0.6	3.6	0.9	6.6	1.3	0.1	0.0	0.0	0.0	0.0	25
26	0.1	2.4	0.6	3.1	0.9	3.8	1.3	0.2	0.0	0.0	0.0	0.0	26
27	0.1	1.9	0.6	2.9	0.8	3.1	1.2	0.2	0.0	0.0	0.0	0.0	27
28	0.2	1.7	0.6	2.4	0.8	2.7	1.2	0.2	0.0	0.0	0.0	0.0	28
29	0.1	1.6	0.7	2.3	0.8	2.4	1.0	0.1	0.0	0.0	0.0	0.0	29
30	0.2	1.3	0.7	2.2	2.4	2.4	0.9	0.1	0.0	0.0	0.0	0.0	30
31	0.2		0.7	2.0	2.5	2.5		0.1		0.0	0.0		31
MEAN	0.1	2.3	0.9	2.2	1.1	2.0	2.3	0.8	0.0	0.0	0.0	0.0	MEAN
MAX.	0.7	24.0	1.6	21.0	1.9	13.0	8.6	3.9	0.3	0.0	0.0	0.0	MAX.
MIN.	0.0	0.2	0.6	0.3	0.8	0.6	0.9	0.1	0.0	0.0	0.0	0.0	MIN.
AC. FT.	7	135	52	135	65	126	134	47	2				AC. FT.

E - ESTIMATED
 NR - NO RECORD
 * - DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # - E AND *

MEAN DISCHARGE
1.0

MAXIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME
45.0	3.11	11	20	0330

MINIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME
0.0		10	1	0000

TOTAL ACRE FEET
705

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 20 27	119 53 35	NE 9 7S 19E	1180E	8.87	4-3-58	NOV 57-DATE		1957		0.00	LOCAL

Station located 8.7 mi. N of Raymond, 11 mi. SE of Mariposa. Tributary to Chowchilla River. Drainage area is 17.1 sq. mi. Altitude of gage is approximately 1090 ft. (from USGS topographic maps.)

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	B62400	MARIPOSA CREEK NEAR CATHEYS VALLEY

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0.0	0.3	5.1	3.3	12	4.3	38	4.6	1.0	0.0	0.0	0.0	1
2	0.0	0.3	5.1	3.3	10	7.1	47	4.6	0.7	0.0	0.0	0.0	2
3	0.0*	0.5	5.1	3.1	9.0	5.8*	26	4.9	0.5	0.0*	0.0	0.0	3
4	0.0	0.8	4.5*	3.1	8.1	4.4	19	6.3	0.4*	0.0	0.0*	0.0	4
5	0.0	1.2*	4.3	3.3	7.4	4.0	16	6.1	0.4	0.0	0.0	0.0	5
6	0.0	5.0	4.3	3.3	7.0*	3.5	14 *	11 *	0.3	0.0	0.0	0.0	6
7	0.0	3.3	3.9	3.1	6.8	3.8	11	8.9	0.3	0.0	0.0	0.0	7
8	0.0	1.6	3.8	3.1*	6.3	3.2	10	6.4	0.4	0.0	0.0	0.0*	8
9	0.0	1.1	4.9	3.1	6.3	3.0	9.2	5.3	0.7	0.0	0.0	0.0	9
10	0.0	0.9	5.3	3.0	6.2	2.6	8.2	4.8	1.1	0.0	0.0	0.0	10
11	0.0	0.9	4.4	2.9	5.8	2.5	7.4	4.2	1.1	0.0	0.0	0.0	11
12	0.0	0.7	4.3	3.0	5.5	4.1	6.4	3.9	1.0	0.0	0.0	0.0	12
13	0.0	0.8	4.2	2.9	5.3	5.7	6.1	3.5	0.7	0.0	0.0	0.0	13
14	0.0	1.6	3.8	2.8	5.0	3.5	5.8	3.1	0.6	0.0	0.0	0.0	14
15	0.0	60	3.4	2.9	5.1	2.7	5.7	2.9	0.5	0.0	0.0	0.0	15
16	0.0	7.2	3.2	3.1	5.1	2.7	5.5	2.7	0.4	0.0	0.0	0.0	16
17	0.0*	3.1	3.3	3.2	4.8	2.2	5.0	2.4	0.3	0.0	0.0	0.0*	17
18	0.0	2.2	3.1	4.2	4.8	2.1	4.8	2.4	0.3	0.0	0.0	0.0	18
19	0.0	3.0	3.6	5.1	4.6	1.9	5.0	2.2	0.3	0.0	0.0	0.0	19
20	0.0	161 *	3.3	4.6	4.1	1.8	6.0	2.0	0.2	0.0*	0.0	0.0	20
21	0.0	42	3.0	11	4.0	1.9	5.4	1.9	0.1	0.0	0.0	0.0	21
22	0.0	11	2.9	218	4.0	3.8	5.2	1.8	0.1	0.0	0.0	0.0*	22
23	0.0	10	2.9	70	4.0	48	5.5	1.6	0.0	0.0	0.0	0.0	23
24	0.0	53	2.7	50	3.9	107 *	5.3	1.4	0.0	0.0	0.0	0.0	24
25	0.0	17	2.7	30	4.5	65	5.4	1.3	0.0	0.0	0.0	0.0	25
26	0.0	9.0	2.9	23	5.1	58	5.0	1.5	0.0	0.0	0.0	0.0	26
27	0.0	7.0	3.1	24	4.8	65	4.7	1.7	0.0	0.0	0.0	0.0	27
28	0.1	6.5	3.1	18	4.6	45	4.6	1.6	0.0	0.0	0.0	0.0	28
29	0.2	5.5	3.2	18	4.2	23	4.6	1.4	0.0	0.0	0.0	0.0	29
30	0.2	5.4	3.2	15	15	15	4.5	1.3	0.0	0.0	0.0	0.0	30
31	0.2		3.1	14		13		1.2		0.0	0.0		31
MEAN	0.0	14.1	3.7	18.0	5.8	16.6	10.2	3.5	0.4	0.0	0.0	0.0	MEAN
MAX.	0.2	161	5.3	218	12.0	107	47.0	11.0	1.1	0.0	0.0	0.0	MAX.
MIN.	0.0	0.3	2.7	2.8	3.9	1.8	4.5	1.2	0.0	0.0	0.0	0.0	MIN.
AC. FT.	1	837	229	1106	334	1023	608	216	23				AC. FT.

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # — E AND *

MEAN	MAXIMUM	MINIMUM	TOTAL
DISCHARGE	DISCHARGE	DISCHARGE	ACRE FEET
6.0	529	0.0	4376
	GAGE HT.	GAGE HT.	
	6.11		
	MO. DAY TIME	MO. DAY TIME	
	1 22 0540	10 1 0000	

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D. 8. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			CF5	GAGE HT.	DATE			FROM	TO		
37 23 55	120 00 10	NE21 6S 18E	7180E	11.62	4- 3-58	NOV 57-DATE		1957		0.00	LOCAL
Station located at Co. Rd. bridge, 5.6 mi. E. of Catheys Valley School. Tributary to San Joaquin River via Eastside Bypass. Drainage area is 66.0 sq. mi. Altitude of gage is 1100 ft. (from topographic map.)											

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	862100	MARIPOSA CREEK BELOW MARIPOSA RESERVOIR

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0.0	0.0	8.0	6.0	17	7.0	20	5.0	0.5	0.0	0.0	0.0	1
2	0.0	0.0	8.0	6.0	16	8.0	34	5.0	0.5	0.0	0.0	0.0	2
3	0.0	0.0	7.0	5.0	14	8.0	38	5.0	0.5	0.0	0.0	0.0	3
4	0.0	0.0	7.0	5.0	13	9.0	26	5.0	0.5	0.0	0.0	0.0	4
5	0.0	0.0	7.0	5.0	12	9.0	21	5.0	0.5	0.0	0.0	0.0	5
6	0.0	0.0	6.0	5.0	11	8.0	18	5.0	0.1	0.0	0.0	0.0	6
7	0.0	0.0	6.0	5.0	11	8.0	16	7.0	0.0	0.0	0.0	0.0	7
8	0.0	0.0	6.0	5.0	10	7.0	15	10	0.0	0.0	0.0	0.0	8
9	0.0	0.0	6.0	5.0	10	7.0	14	8.0	0.0	0.0	0.0	0.0	9
10	0.0	0.0	7.0	5.0	10	7.0	12	6.0	0.0	0.0	0.0	0.0	10
11	0.0	0.0	7.0	5.0	10	7.0	12	5.0	0.0	0.0	0.0	0.0	11
12	0.0	0.0	8.0	5.0	9.0	7.0	10	4.0	0.0	0.0	0.0	0.0	12
13	0.0	0.0	8.0	5.0	9.0	7.0	10	4.0	0.0	0.0	0.0	0.0	13
14	0.0	0.0	7.0	5.0	8.0	9.0	9.0	3.0	0.0	0.0	0.0	0.0	14
15	0.0	0.0	7.0	5.0	8.0	10	8.0	3.0	0.0	0.0	0.0	0.0	15
16	0.0	0.0	7.0	5.0	8.0	9.0	8.0	2.0	0.0	0.0	0.0	0.0	16
17	0.0	0.0	6.0	5.0	8.0	8.0	7.0	2.0	0.0	0.0	0.0	0.0	17
18	0.0	0.0	6.0	6.0	8.0	8.0	7.0	2.0	0.0	0.0	0.0	0.0	18
19	0.0	0.0	6.0	6.0	8.0	7.0	6.0	2.0	0.0	0.0	0.0	0.0	19
20	0.0	0.0	6.0	6.0	8.0	6.0	7.0	2.0	0.0	0.0	0.0	0.0	20
21	0.0	6.0	6.0	6.0	7.0	5.0	7.0	1.0	0.0	0.0	0.0	0.0	21
22	0.0	26	6.0	6.0	7.0	6.0	7.0	1.0	0.0	0.0	0.0	0.0	22
23	0.0	17	6.0	114	7.0	8.0	7.0	1.0	0.0	0.0	0.0	0.0	23
24	0.0	13	6.0	50	7.0	56	7.0	1.0	0.0	0.0	0.0	0.0	24
25	0.0	31	6.0	32	7.0	93	6.0	1.0	0.0	0.0	0.0	0.0	25
26	0.0	20	6.0	25	7.0	56	6.0	1.0	0.0	0.0	0.0	0.0	26
27	0.0	14	6.0	21	6.0	54	6.0	1.0	0.0	0.0	0.0	0.0	27
28	0.0	11	6.0	20	7.0	48	6.0	1.0	0.0	0.0	0.0	0.0	28
29	0.0	10	6.0	20	8.0	38	5.0	1.0	0.0	0.0	0.0	0.0	29
30	0.0	9.0	6.0	20		28	5.0	1.0	0.0	0.0	0.0	0.0	30
31	0.0		6.0	18		21		1.0		0.0	0.0		31
MEAN	0.0	7.0	6.5	16.1	9.3	18.4	12.0	3.3	0.1	0.0	0.0	0.0	MEAN
MAX.	0.0	60.0	8.0	114	17.0	93.0	38.0	10.0	0.5	0.0	0.0	0.0	MAX.
MIN.	0.0	0.0	6.0	5.0	6.0	5.0	5.0	1.0	0.0	0.0	0.0	0.0	MIN.
AC. FT.		419	401	990	538	1129	714	200	5				AC. FT.

E - ESTIMATED
 NR - NO RECORD
 * - DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # - E AND *

MEAN
DISCHARGE
6.1

MAXIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

MINIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

TOTAL
ACRE FEET
4396

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 16 52	120 09 45	NE36 7S 16E	6020		12-24-55	NOV 52-DATE		1952		337.63	USCGS

Station located 1.5 mi. below Mariposa Dam. Tributary to San Joaquin River via Eastside Bypass. Flow regulated by Mariposa Reservoir. Records furnished by U.S.C.E. Drainage area is 108 sq. mi.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	B00420	MARIPOSA BYPASS NEAR CRANE RANCH

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1													1
2													2
3													3
4													4
5													5
6													6
7													7
8													8
9													9
10													10
11													11
12													12
13													13
14													14
15													15
16													16
17													17
18													18
19													19
20													20
21													21
22													22
23													23
24													24
25													25
26													26
27													27
28													28
29													29
30													30
31													31
MEAN													MEAN
MAX.													MAX.
MIN.													MIN.
AC. FT.													AC. FT.

INSUFFICIENT DATA TO PUBLISH

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # — E AND *

MEAN
DISCHARGE

MAXIMUM			
DISCHARGE	GAGE HT.	MO.	DAY TIME

MINIMUM			
DISCHARGE	GAGE HT.	MO.	DAY TIME

TOTAL
ACRE FEET

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 12 00	130 41 50	NW 31 8S 11E						1962		0.00	USCGS

This station was installed in January 1962 for the Lower San Joaquin Flood Control Project for the purpose of recording flows diverted into Mariposa bypass by float activated electrically operated gates. No continuous water stage recorder is installed to date. Miscellaneous measurements of instantaneous discharge will be presented when appropriate.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE
 (IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	B06170	OWENS CREEK BELOW OWENS RESERVOIR

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0.0	0.0	0.5	0.5	0.9	0.7	1.7	0.5	0.0	0.0	0.0	0.0	1
2	0.0	0.0	0.5	0.5	0.9	1.1	2.0	0.5	0.0	0.0	0.0	0.0	2
3	0.0	0.0	0.5	0.5	0.8	1.0	2.0	0.5	0.0	0.0	0.0	0.0	3
4	0.0	0.0	0.5	0.5	0.8	0.8	1.0	0.5	0.0	0.0	0.0	0.0	4
5	0.0	0.0	0.5	0.5	0.7	0.8	1.0	0.5	0.0	0.0	0.0	0.0	5
6	0.0	0.4	0.5	0.5	0.7	0.7	1.0	0.5	0.0	0.0	0.0	0.0	6
7	0.0	0.4	0.5	0.5	0.6	0.7	1.0	0.8	0.0	0.0	0.0	0.0	7
8	0.0	0.4	0.5	0.6	0.6	0.8	0.9	0.8	0.0	0.0	0.0	0.0	8
9	0.0	0.4	0.5	0.6	0.6	0.8	0.8	0.6	0.0	0.0	0.0	0.0	9
10	0.0	0.4	0.5	0.6	0.6	0.8	0.8	0.5	0.0	0.0	0.0	0.0	10
11	0.0	0.4	0.5	0.6	0.6	0.7	0.7	0.5	0.0	0.0	0.0	0.0	11
12	0.0	0.4	0.5	0.6	0.5	0.8	0.6	0.4	0.0	0.0	0.0	0.0	12
13	0.0	0.4	0.5	0.6	0.5	1.0	0.6	0.4	0.0	0.0	0.0	0.0	13
14	0.0	0.4	0.5	0.6	0.5	1.0	0.6	0.4	0.0	0.0	0.0	0.0	14
15	0.0	0.5	0.5	0.6	0.5	0.8	0.5	0.3	0.0	0.0	0.0	0.0	15
16	0.0	0.5	0.5	0.6	0.7	0.7	0.5	0.2	0.0	0.0	0.0	0.0	16
17	0.0	0.4	0.5	0.6	0.7	0.6	0.5	0.1	0.0	0.0	0.0	0.0	17
18	0.0	0.4	0.5	0.8	0.6	0.6	0.5	0.0	0.0	0.0	0.0	0.0	18
19	0.0	0.5	0.5	0.8	0.6	0.6	0.5	0.0	0.0	0.0	0.0	0.0	19
20	0.0	0.5	0.5	0.8	0.5	0.6	0.6	0.0	0.0	0.0	0.0	0.0	20
21	0.0	0.5	0.5	1.1	0.5	0.6	0.6	0.0	0.0	0.0	0.0	0.0	21
22	0.0	0.5	0.5	9.0*	0.5	1.0	0.7	0.0	0.0	0.0	0.0	0.0	22
23	0.0	0.5	0.5	4.0	0.5	3.0	0.7	0.0	0.0	0.0	0.0	0.0	23
24	0.0	0.5	0.5	2.0	0.5	4.0	0.6	0.0	0.0	0.0	0.0	0.0	24
25	0.0	0.5	0.5	1.8	0.5	3.0	0.5	0.0	0.0	0.0	0.0	0.0	25
26	0.0	0.5	0.5	1.5	0.5	2.0	0.5	0.0	0.0	0.0	0.0	0.0	26
27	0.0	0.5	0.5	1.2	0.5	1.7	0.5	0.0	0.0	0.0	0.0	0.0	27
28	0.0	0.5	0.5	1.1	0.5	1.4	0.5	0.0	0.0	0.0	0.0	0.0	28
29	0.0	0.5	0.5	1.0	0.6	1.2	0.5	0.0	0.0	0.0	0.0	0.0	29
30	0.0	0.5	0.5	1.0		1.0	0.5	0.0	0.0	0.0	0.0	0.0	30
31	0.0		0.5	0.9		1.1		0.0		0.0	0.0		31
MEAN	0.0	0.4	0.5	1.2	0.6	1.1	0.8	0.3	0.0	0.0	0.0	0.0	MEAN
MAX.	0.0	0.5	0.5	9.0	0.9	4.0	2.0	0.8	0.0	0.0	0.0	0.0	MAX.
MIN.	0.0	0.0	0.5	0.5	0.5	0.6	0.5	0.0	0.0	0.0	0.0	0.0	MIN.
AC. FT.		23	31	72	35	71	46	16					AC. FT.

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # — E AND *

MEAN DISCHARGE
0.4

MAXIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

MINIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

TOTAL ACRE FEET
293

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D. & B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 18 28	120 11 35	SW23 7S 16E	590		12-24-55	FEB 50-DATE		1950		338.22	USCGS

Station located 0.25 mi. below Owens Dam. Tributary to San Joaquin River, via Eastside Bypass. Flow regulated by Owens Reservoir. Records furn. by U.S.C.E. Drainage area is 25.6 sq. mi.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	B55400	BEAR CREEK NEAR CATHEYS VALLEY

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0.0	0.0	1.2	0.6	4.0	0.8	6.9	0.8	0.3	0.0	0.0	0.0	1
2	0.0	0.0	1.1	0.6	3.2	1.1	17	0.7	0.3	0.0	0.0	0.0	2
3	0.0*	0.0	1.2	0.5	2.8	1.2*	9.0	0.9	0.3	0.0*	0.0	0.0	3
4	0.0	0.0	1.0*	0.5	2.4	1.0	5.8	1.1	0.2	0.0	0.0*	0.0	4
5	0.0	0.0*	1.0	0.5	2.0	0.9	4.3	1.2	0.2	0.0	0.0	0.0	5
6	0.0	0.0	0.9	0.5	1.7*	0.8	3.4*	2.8*	0.2	0.0	0.0	0.0	6
7	0.0	0.0	0.8	0.5	1.5	0.9	2.8	2.5	0.2	0.0	0.0	0.0	7
8	0.0	0.0	0.7	0.5*	1.4	0.9	2.3	1.6	0.1	0.0	0.0	0.0*	8
9	0.0	0.0	1.0	0.4	1.3	0.8	2.0	1.4	0.1	0.0	0.0	0.0	9
10	0.0	0.0	1.0	0.4	1.2	0.8	1.8	1.2	0.1	0.0	0.0	0.0	10
11	0.0	0.0	0.9	0.4	1.1	0.8	1.6	1.1	0.1	0.0	0.0	0.0	11
12	0.0	0.0	0.9	0.4	1.1	1.0	1.5	1.0	0.1	0.0	0.0	0.0	12
13	0.0	0.0	0.9	0.4	1.1	1.7	1.3	1.0	0.1	0.0	0.0	0.0	13
14	0.0	0.0	0.8	0.4	1.1	1.4	1.2	0.9	0.1	0.0	0.0	0.0	14
15	0.0	0.0	0.8	0.4	1.0	1.2	1.2	0.8	0.1	0.0	0.0	0.0	15
16	0.0	0.0	0.8	0.4	1.0	1.0	1.1	0.7	0.1	0.0	0.0	0.0	16
17	0.0	0.0	0.7	0.5	1.0	0.9	1.1	0.8	0.1	0.0	0.0	0.0*	17
18	0.0	0.0	0.7	0.6	1.0	0.9	1.0	0.7	0.1	0.0	0.0	0.0	18
19	0.0	0.0*	0.7	0.7	1.0	0.8	1.1	0.7	0.1	0.0	0.0	0.0	19
20	0.0	11 *	0.7	0.8	0.9	0.9	1.1	0.7	0.0	0.0*	0.0	0.0	20
21	0.0	9.3	0.7	2.7	0.9	1.0	1.1	0.7	0.0	0.0	0.0	0.0*	21
22	0.0	3.1	0.6	1.4	0.9	1.7	1.0	0.7	0.0	0.0	0.0	0.0	22
23	0.0	3.1	0.5	55	0.9	12	1.1	0.7	0.0	0.0	0.0	0.0	23
24	0.0*	21	0.6	37	0.8	39 *	1.6	0.6	0.0	0.0	0.0	0.0	24
25	0.0	7.7	0.6	28	0.8	31	1.5	0.5	0.0	0.0	0.0	0.0	25
26	0.0	3.6	0.5	22	0.8	22	1.1	0.6	0.0	0.0	0.0	0.0	26
27	0.0	2.3	0.5	18	0.8	14	1.0	0.5	0.0	0.0	0.0	0.0	27
28	0.0	1.7	0.5	12	0.8	9.4	0.9	0.4	0.0	0.0	0.0	0.0	28
29	0.0	1.6	0.5	8.6	0.8	5.7	0.8	0.4	0.0	0.0	0.0	0.0	29
30	0.0	1.4	0.5	6.4		4.2	0.8	0.3	0.0	0.0	0.0	0.0	30
31	0.0		0.6	5.2		3.4		0.3		0.0	0.0		31
MEAN	0.0	2.2	0.8	11.3	1.4	5.3	2.6	0.9	0.1	0.0	0.0	0.0	MEAN
MAX.	0.0	21.0	1.2	144	4.0	39.0	17.0	2.8	0.3	0.0	0.0	0.0	MAX.
MIN.	0.0	0.0	0.5	0.4	0.8	0.8	0.8	0.3	0.0	0.0	0.0	0.0	MIN.
AC. FT.		131	47	692	78	324	156	56	6				AC. FT.

E - ESTIMATED

NR - NO RECORD

* - DISCHARGE MEASUREMENT OR
OBSERVATION OF NO FLOW

H - E AND *

MEAN
DISCHARGE
2.1

MAXIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME
427	5.81	1	22	0530

MINIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME
0.0		10	1	0000

TOTAL
ACRE FEET
1489

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B.&M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			CFS	GAGE HT.	DATE			FROM	TO		
37 28 38	120 06 43	SW21 5S 17E	3850E	9.98	2-1-63	DEC 57-DATE		1957		0.00	LOCAL

Station located at Co. Rd. bridge, 3.7 mi. N. of Catheys Valley School. Tributary to San Joaquin River via Eastside Bypass. Drainage area is 24.6 sq. mi. Altitude of gage is approx. 1,210 ft. (from topographic map.)

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	B05570	BEAR CREEK BELOW BEAR RESERVOIR

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0.0	0.0	4.0	3.0	8.0	3.0	7.0	2.0	1.0	0.0	0.0	0.0	1
2	0.0	0.0	3.0	3.0	7.0	3.0	8.0	2.0	1.0	0.0	0.0	0.0	2
3	0.0	0.0	3.0	3.0	6.0	3.0	14	2.0	1.0	0.0	0.0	0.0	3
4	0.0	0.0	3.0	3.0	6.0	3.0	10	2.0	1.0	0.0	0.0	0.0	4
5	0.0	0.0	3.0	3.0	6.0	3.0	8.0	3.0	1.0	0.0	0.0	0.0	5
6	0.0	0.0	3.0	3.0	6.0	3.0	7.0	3.0	1.0	0.0	0.0	0.0	6
7	0.0	0.0	3.0	3.0	5.0	3.0	6.0	4.0	1.0	0.0	0.0	0.0	7
8	0.0	0.0	3.0	3.0	5.0	3.0	6.0	5.0	1.0	0.0	0.0	0.0	8
9	0.0	0.0	3.0	3.0	4.0	3.0	5.0	5.0	1.0	0.0	0.0	0.0	9
10	0.0	0.0	3.0	3.0	4.0	3.0	5.0	4.0	1.0	0.0	0.0	0.0	10
11	0.0	0.0	3.0	3.0	4.0	3.0	4.0	3.0	1.0	0.0	0.0	0.0	11
12	0.0	0.0	4.0	3.0	4.0	3.0	4.0	3.0	1.0	0.0	0.0	0.0	12
13	0.0	0.0	3.0	3.0	3.0	3.0	4.0	3.0	0.5	0.0	0.0	0.0	13
14	0.0	0.0	3.0	3.0	3.0	3.0	3.0	2.0	0.5	0.0	0.0	0.0	14
15	0.0	0.0	3.0	3.0	3.0	3.0	3.0	2.0	0.5	0.0	0.0	0.0	15
16	0.0	0.0	3.0	3.0	3.0	3.0	3.0	2.0	0.5	0.0	0.0	0.0	16
17	0.0	0.0	3.0	3.0	3.0	3.0	3.0	1.0	0.5	0.0	0.0	0.0	17
18	0.0	0.0	3.0	3.0	3.0	3.0	3.0	1.0	0.5	0.0	0.0	0.0	18
19	0.0	0.0	3.0	3.0	3.0	3.0	3.0	1.0	0.5	0.0	0.0	0.0	19
20	0.0	0.0	3.0	3.0	3.0	3.0	3.0	1.0	0.0	0.0	0.0	0.0	20
21	0.0	0.0	4.0	4.0	3.0	3.0	2.0	1.0	0.0	0.0	0.0	0.0	21
22	0.0	0.0	3.0	121 *	3.0	3.0	2.0	1.0	0.0	0.0	0.0	0.0	22
23	0.0	0.0	3.0	93	3.0	4.0	2.0	1.0	0.0	0.0	0.0	0.0	23
24	0.0	0.0	3.0	63	3.0	16	2.0	1.0	0.0	0.0	0.0	0.0	24
25	0.0	5.0	3.0	42	3.0	40	2.0	1.0	0.0	0.0	0.0	0.0	25
26	0.0	9.0	3.0	31	3.0	27	3.0	1.0	0.0	0.0	0.0	0.0	26
27	0.0	7.0	3.0	25	3.0	18	3.0	1.0	0.0	0.0	0.0	0.0	27
28	0.0	6.0	3.0	19	3.0	14	3.0	1.0	0.0	0.0	0.0	0.0	28
29	0.0	5.0	3.0	13	3.0	10	2.0	1.0	0.0	0.0	0.0	0.0	29
30	0.0	4.0	3.0	11		7.0	2.0	1.0	0.0	0.0	0.0	0.0	30
31	0.0		3.0	8.0		7.0		1.0		0.0	0.0		31
MEAN	0.0	1.2	3.1	15.8	4.0	6.7	4.4	2.0	0.5	0.0	0.0	0.0	MEAN
MAX.	0.0	9.0	4.0	121	8.0	40	14	5.0	1.0	0.0	0.0	0.0	MAX.
MIN.	0.0	0.0	3.0	3.0	3.0	3.0	2.0	1.0	0.0	0.0	0.0	0.0	MIN.
AC. FT.		71	190	972	230	415	262	123	31				AC. FT.

E - ESTIMATED
 NR - NO RECORD
 * - DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 H - E AND *

MEAN
DISCHARGE
3.2

MAXIMUM
DISCHARGE
GAGE HT.
MO.
DAY
TIME

MINIMUM
DISCHARGE
GAGE HT.
MO.
DAY
TIME

TOTAL
ACRE FEET
2294

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 21 27	120 14 05	NE 5 7S 16E	4460		12-24-55	JAN 55-DATE		1955		320.50	USCGS

Station located approx. 0.75 mi. below Bear Dam. Tributary to San Joaquin River via Eastside Bypass. Flow regulated by Bear Reservoir. Records furn. by U.S.C.E. Drainage area is 72 sq. mi.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

TABLE B-4 (Cont.)													
DAILY MEAN DISCHARGE													
(IN CUBIC FEET PER SECOND)													
WATER YEAR													
STATION NO.													
STATION NAME													
1964													
856400													
BURNS CREEK AT HORNITOS													
DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0.0	0.0	0.1	0.2	1.1	0.4	0.7	0.1	0.0	0.0	0.0	0.0	1
2	0.0	0.0	0.1	0.1	1.0	0.5	0.6	0.1	0.0	0.0	0.0	0.0	2
3	0.0	0.0	0.1	0.1	1.0	0.4*	0.4	0.2	0.0	0.0	0.0	0.0	3
4	0.0	0.0	0.1*	0.1	0.9	0.4	0.4	0.2	0.0	0.0	0.0*	0.0	4
5	0.0	0.0	0.1	0.1	0.8	0.3	0.4	0.2	0.0	0.0	0.0	0.0	5
6	0.0	0.1	0.1	0.1	0.7*	0.3	0.3*	0.3*	0.0	0.0	0.0	0.0	6
7	0.0	0.0	0.1	0.2	0.7	0.4	0.3	0.2	0.0	0.0	0.0	0.0	7
8	0.0	0.0	0.1	0.2*	0.6	0.3	0.3	0.2	0.0	0.0	0.0	0.0*	8
9	0.0	0.0	0.2	0.1	0.6	0.3	0.3	0.2	0.0	0.0	0.0	0.0	9
10	0.0	0.0	0.1	0.1	0.6	0.3	0.2	0.2	0.0	0.0	0.0	0.0	10
11	0.2	0.0	0.1	0.2	0.6	0.3	0.2	0.1	0.0	0.0	0.0	0.0	11
12	0.1	0.0	0.1	0.2	0.6	0.3	0.2	0.1	0.0	0.0	0.0	0.0	12
13	0.0	0.0	0.1	0.2	0.5	0.3	0.2	0.1	0.0	0.0	0.0	0.0	13
14	0.0	0.1	0.1	0.1	0.5	0.3	0.2	0.1	0.0	0.0	0.0	0.0	14
15	0.0	0.2	0.1	0.1	0.5	0.2	0.2	0.1	0.0	0.0	0.0	0.0	15
16	0.0	0.1	0.1	0.1	0.5	0.3	0.2	0.1	0.0	0.0	0.0	0.0	16
17	0.0	0.1	0.1	0.2	0.5	0.3	0.2E	0.1	0.0	0.0	0.0	0.0*	17
18	0.0	0.0	0.1	0.2	0.4	0.3	0.2E	0.0	0.0	0.0	0.0	0.0	18
19	0.0	0.2*	0.2	0.2	0.4	0.3	0.2E	0.0	0.0	0.0	0.0	0.0	19
20	0.0	0.4	0.2	0.2	0.5	0.3	0.2E	0.0	0.0	0.0*	0.0	0.0	20
21	0.0	0.1	0.1	14 *	0.5	0.2	0.2E	0.0	0.0	0.0	0.0	0.0	21
22	0.0	0.1	0.1	95	0.4	0.4	0.2E	0.0	0.0	0.0	0.0	0.0	22
23	0.0	0.2	0.2	21	0.4	0.8	0.1E	0.0	0.0	0.0	0.0	0.0	23
24	0.0	0.2	0.2	7.5	0.4	1.0	0.1E	0.0	0.0	0.0	0.0	0.0	24
25	0.0	0.2	0.2	4.2	0.4	0.7	0.1E	0.0	0.0	0.0	0.0	0.0	25
26	0.0	0.1	0.2	2.9	0.4	0.6	0.1E	0.0	0.0	0.0	0.0	0.0	26
27	0.0	0.1	0.1	2.0	0.3	0.6	0.1E	0.0	0.0	0.0	0.0	0.0	27
28	0.0	0.1	0.1	1.7	0.4	0.6	0.1	0.0	0.0	0.0	0.0	0.0	28
29	0.0	0.1	0.2	1.5	0.4	0.5	0.1	0.0	0.0	0.0	0.0	0.0	29
30	0.0	0.1	0.2	1.2		0.5	0.1	0.0	0.0	0.0	0.0	0.0	30
31	0.0		0.2	1.2		0.5		0.0		0.0	0.0		31
MEAN	0.0	0.1	0.1	5.0	0.6	0.4	0.2	0.1	0.0	0.0	0.0	0.0	MEAN
MAX.	0.2	0.4	0.2	95.0	1.1	1.0	0.7	0.3	0.0	0.0	0.0	0.0	MAX.
MIN.	0.0	0.0	0.1	0.1	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	MIN.
AC. FT.	1	5	8	308	33	26	14	5					AC. FT.

E - ESTIMATED

NR - NO RECORD

* - DISCHARGE MEASUREMENT OR
OBSERVATION OF NO FLOW

H - E AND *

MEAN
DISCHARGE
0.5

MAXIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME
222	4.25	1	22	0443

MINIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME
0.0		10	1	0000

TOTAL
ACRE FEET
399

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B.&M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			CFS	GAGE HT.	DATE			FROM	TO		
37 29 42	120 14 17	SE17 5S 16E	4340E	10.66	2-15-62	DEC 58-DATE		1958		0.00	LOCAL
Station located 130 ft. S of Stockton-Mariposa Road, 0.2 mi. SW of Hornitos. Tributary of San Joaquin River via Bear Creek. Drainage area is 26.7 sq. mi. Maximum discharge from slope-area measurement. Altitude of gage is approx. 780 ft. (From U.S.G.S. topographic map.)											

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	B56100	BURNS CREEK BELOW BURNS RESERVOIR

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1
2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2
3	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3
4	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14
15	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15
16	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18
19	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19
20	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20
21	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21
22	0.0	0.5	0.0	2.8*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22
23	0.0	0.3	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23
24	0.0	1.2	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24
25	0.0	1.2	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25
26	0.0	0.6	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26
27	0.0	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27
28	0.0	0.2	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28
29	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29
30	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30
31	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31
MEAN	0.0	0.2	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	MEAN
MAX.	0.0	1.2	0.0	3.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	MAX.
MIN.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	MIN.
AC. FT.		14		22	1								AC. FT.

E - ESTIMATED
 NR - NO RECORD
 * - DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # - E AND *

MEAN DISCHARGE
0.0

MAXIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

MINIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

TOTAL ACRE FEET
37

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 22-27	120 16 35	NE36 6S 15E	2590		12-24-55	APR 50- DATE		1950		260.60	USCGS

Station located 0.5 mi. below Burns Dam. Tributary to San Joaquin River via Bear Creek. Flow regulated by Burns Reservoir. Records furn. by U.S.C.E. Drainage area is 73.8 sq. mi.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	B07400	SAN JOAQUIN RIVER NEAR STEVINSON

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	63	21	21	27	33	25	46	49	100	42	42	55	1
2	59	19	18	29	33	25 *	49 *	47	100	30	42	52	2
3	53	18	18	37 *	30	24	48	46	81	34 *	49	50	3
4	51	16	19 *	45	31	22	51	48 *	53	33	55 *	48 *	4
5	55	16	18	80	26 *	22	43	51	41	31	54	41	5
6	56	17	17	81	26	25	37	59	41	28	49	36	6
7	55	16	20	115	25	25	38	59	38	26	44	36	7
8	62	15 *	22	75	19	26	40	52	38	29	36	39	8
9	69	14	21	52	19	29	37	55	43	32	35	34	9
10	63	12	21	49	19	31	32	54	58	34	38	32	10
11	53	14	20	47	15	30	31	53	83	32	35	30	11
12	62	20	14	44	14	32	28	61	125	32	34	28	12
13	65	20	13	55	14	35	32	63	148	37	36	27	13
14	65	16	13	54	15	38	37	62	119	36	35	27	14
15	81	18	16	54	33	42	39	53	86	42	36	25	15
16	83 *	25	21	49	44	44	37	51	67	44	39	25	16
17	61	26	21	42	25	43	40	49	57	38	40	24	17
18	60	28	21	36	26	38	41	48	53	34	37	24	18
19	67	28	21	34	22	45	44	50	46	36	33	22	19
20	68	37	26	32	23	37	56	62	40	38	40	23	20
21	62	42	27	31	23	33	76	76	38	40	41	22	21
22	62	43	24	61	22	34	53	74	40	44	44	26	22
23	52	45	22	103	22	35	43	75	48	44	47	29	23
24	47	42	23	112	22	37	46	83	55	44	48	25	24
25	47	39	24	111	20	47	50	91	52	44	51	25	25
26	51	35	27	96	21	48	51	89	44	42	58	26	26
27	46	30	26	81	26	45	51	89	38	39	57	26	27
28	43	28	25	53	27	46	50	88	41	36	53	29	28
29	40	26	23	33	24	46	50	89	40	38	50	31	29
30	32	24	25	25		42	48	88	43	42	51	32	30
31	25		24	30		42		86		41	52		31
MEAN	56.7	25.0	21.0	57.2	24.1	35.3	44.1	64.5	61.9	36.8	43.9	31.6	MEAN
MAX.	83.0	45.0	27.0	115	44.0	48.0	76.0	91.0	148	44.0	58.0	55.0	MAX.
MIN.	25.0	12.0	13.0	25.0	14.0	22.0	28.0	46.0	38.0	26.0	33.0	22.0	MIN.
AC. FT.	3487	1488	1291	3517	1386	2168	2626	3967	3681	2265	2700	1882	AC. FT.

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # — E AND *

MEAN
DISCHARGE
42.0

MAXIMUM			
DISCHARGE	GAGE HT.	MO.	DAY
152	62.48	6	12
			TIME
			2100

MINIMUM			
DISCHARGE	GAGE HT.	MO.	DAY
12.0	60.6	11	10
			TIME
			1220

TOTAL
ACRE FEET
30460

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 17 42	120 51 00	26 7S 10E	6060	73.04	2-17-62	OCT 61-DATE	MAY 61-SEP 61	1961		0.00	USCGS

Station located on bridge 2.3 miles south of Stevinson on Lander Avenue.

TABLE B-4 (Cont.)

WATER YEAR	STATION NO.	STATION NAME
1964	B52600	NORTH FORK MERCED RIVER NEAR COULTERVILLE

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	2.4	7.8	4.5	1.5	13	3.7	16	3.5	2.4	0.6	0.2	0.9	1
2	2.0	8.2	4.9	1.5	11	5.4	18	3.6	2.5	0.5	0.1	0.8	2
3	1.3	8.8	4.7	1.4	9.9	3.7*	13	4.6	2.3	0.3*	0.1	0.5	3
4	0.7	8.5	3.4*	1.4	8.5	3.1	11	5.0	2.1*	0.3	0.1*	0.3*	4
5	0.7	6.1*	3.1	1.5	8.0*	2.8	8.6	5.1	1.9	0.4	0.3	0.4	5
6	0.8	7.5	3.5	1.3	8.0	2.8	7.6*	8.2*	2.2	0.4	0.3	0.4	6
7	1.0	2.7	3.4	1.3	6.4	3.0	6.3	7.9	2.4	0.4	0.4	0.3	7
8	1.0	2.0	3.3	1.3*	6.0	2.4	6.2	7.3	2.4	0.2	0.3	0.3	8
9	1.3	1.8	5.2	1.6	6.3	2.4	5.8	7.1	3.7	0.3	0.3	0.4	9
10	1.5	1.8	3.9	1.8	6.3	2.5	5.4	6.5	2.4	0.3	0.3	0.4	10
11	2.7	1.4	3.6	1.6	5.7	2.7	4.7	5.0	2.1	0.3	0.5	0.6	11
12	0.8	1.5	3.2	1.8	4.9	5.9	4.1	4.7	2.1	0.3	0.5	0.6	12
13	0.7	1.4	2.8	2.2	4.7	5.5	3.6	4.6	1.9	0.3	0.5	0.5	13
14	1.0	4.8	2.7	2.2	4.3	5.2	3.7	4.3	1.6	0.2	0.4	0.5	14
15	1.0	7.3*	2.7	2.1	4.5	4.3	3.8	4.0	1.3	0.3	0.5	0.6	15
16	1.0	2.5	2.4	2.3	4.4	3.8	3.6	3.8	1.3	0.5	0.3	0.5	16
17	0.5*	2.4	2.2	2.5	4.0	3.6	3.3	3.6	1.3	0.3	0.6	0.5	17
18	0.8	2.6	2.2	4.3	3.4	3.7	2.7	3.2	1.1	0.1	0.5	0.4	18
19	1.2	8.0	2.1	3.8	2.6	3.1	4.7	3.2	0.9	0.1	0.6	0.6	19
20	1.8	30 *	2.1	4.2	3.1	3.0	3.7	2.9	0.9	0.2	0.8	0.6	20
21	2.5	11	2.1	18 *	2.9	3.1	4.0	3.1	0.7	0.1	0.6	0.6	21
22	3.1	5.5	2.1	16	3.1	4.7	3.8	3.2	0.7	0.2	0.7	0.6	22
23	4.9	12	2.1	11	2.9	8.0	4.1	3.1	0.7	0.2	0.8	0.6	23
24	6.2	18	2.1	9.2	2.9	10 *	4.1	3.1	0.6	0.2	1.1	0.5	24
25	6.3	9.2	1.8	9.1	3.1	9.3	4.0	2.8	0.6	0.2	0.8	0.6	25
26	5.7	6.6	1.8	8.8	3.2	11	3.8	3.1	0.6	0.2	0.9	0.5	26
27	6.2	5.3	1.8	9.4	3.1	16	3.7	3.8	0.6	0.1	0.8	0.5	27
28	5.5	5.6	1.8	10	3.1	19	3.5	3.2	0.8	0.3	0.6	0.5	28
29	3.7	4.8	1.8	12	3.1	18	3.1	3.1	0.8	0.4	0.6	0.3	29
30	7.5	4.5	1.8	15		12	3.1	2.9	0.6	0.4	0.5	0.3	30
31	7.8		1.5	14		11		2.7		0.4	0.7		31
MEAN	2.7	6.7	2.8	5.6	5.3	6.3	5.8	4.3	1.5	0.3	0.5	0.5	MEAN
MAX.	7.8	30.0	5.2	18.0	13.0	19.0	18.0	8.2	3.7	0.6	1.1	0.9	MAX.
MIN.	0.5	1.4	1.5	1.3	2.6	2.4	2.7	2.7	0.6	0.1	0.1	0.3	MIN.
AC. FT.	166	396	172	345	302	386	343	262	90	18	31	30	AC. FT.

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 H — E AND *

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE FEET
3.5	43.0	3.72	11	20	0210	0.0		7	17	1500	2542

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T.&R. M.O.B.&M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 44 51	120 02 12	NW19 2S 18E	3440	7.83	1-31-63	DEC 58-DATE		1958		0.00	LOCAL

Station located 40 ft. above Greeley Hill Road Bridge, 9 mi. NE of Coulterville. Drainage area is 30.3 sq. mi.
 Altitude of gage is 2,360 ft. (from U.S.G.S. topographic map.)

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	851250	MAXWELL CREEK AT COULTERVILLE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0.0	0.0	0.6	0.5	3.6	1.1	14	0.7	0.2	0.0	0.0	0.0	1
2	0.0	0.0	0.6	0.5	3.1	2.1	12	0.6	0.2	0.0	0.0	0.0	2
3	0.0*	0.0	0.5	0.4	2.1	1.4*	5.9	1.5	0.2	0.0*	0.0	0.0	3
4	0.0	0.1	0.8*	0.4	1.8	1.2	4.0	1.4	0.2*	0.0	0.0*	0.0*	4
5	0.0	0.2*	0.8	0.4	1.7	1.0	3.1	1.2	0.2	0.0	0.0	0.0	5
6	0.0	1.2	0.8	0.4	1.5*	1.2	2.5*	4.9*	0.2	0.0	0.0	0.0	6
7	0.0	0.4	0.8	0.4	1.1	1.4	2.0	3.7	0.2	0.0	0.0	0.0	7
8	0.0	0.3	0.8	0.5*	1.1	1.2	1.8	2.1	0.2	0.0	0.0	0.0	8
9	0.0	0.3	1.6	0.5	1.1	1.1	1.6	1.6	0.3	0.0	0.0	0.0	9
10	0.0	0.4	1.3	0.5	1.3	1.0	1.5	1.6	0.2	0.0	0.0	0.0	10
11	0.8	0.4	1.0	0.6	1.3	0.8	1.3	1.3	0.2	0.0	0.0	0.0	11
12	0.3	0.6	0.8	0.6	1.1	3.8	1.2	1.2	0.1	0.0	0.0	0.0	12
13	0.2	0.8	0.6	0.5	1.1	3.9	1.1	1.1	0.1	0.0	0.0	0.0	13
14	0.1	1.9	0.6	0.5	1.1	2.2	1.0	0.9	0.1	0.0	0.0	0.0	14
15	0.1	10 *	0.7	0.4	1.0	1.7	1.0	0.8	0.1	0.0	0.0	0.0	15
16	0.1	1.3	0.6	0.4	1.1	1.5	0.9	0.8	0.2	0.0	0.0	0.0	16
17	0.0*	0.6	0.5	0.5	1.4	1.4	0.9	0.8	0.1	0.0	0.0	0.0	17
18	0.0	0.3	0.4	1.4	1.3	1.1	0.8	0.7	0.1	0.0	0.0	0.0*	18
19	0.0	2.8	0.5	1.4	1.0	1.0	1.4	0.6	0.1	0.0	0.0	0.0	19
20	0.1	17 *	0.4	1.4	1.4	1.0	1.2	0.5	0.1	0.0	0.0	0.0	20
21	0.1	2.1	0.4	19 *	1.4	1.1	1.0	0.5	0.1	0.0	0.0	0.0	21
22	0.1	0.4	0.4	46	1.2	1.7	0.8	0.4	0.1	0.0	0.0	0.0	22
23	0.1	3.7	0.4	9.9	1.2	3.9	0.9	0.4	0.1	0.0	0.0	0.0	23
24	0.0	6.0	0.4	5.8	1.3	18 *	1.2	0.4	0.0	0.0	0.0	0.0	24
25	0.0	1.4	0.4	4.5	1.2	12	0.9	0.3	0.0	0.0	0.0	0.0	25
26	0.0	0.7	0.4	4.3	1.1	18	0.7	0.4	0.0	0.0	0.0	0.0	26
27	0.0	0.5	0.4	4.3	1.0	15	0.7	0.4	0.0	0.0	0.0	0.0	27
28	0.0	0.5	0.4	3.7	0.9	8.7	0.6	0.3	0.0	0.0	0.0	0.0	28
29	0.0	0.5	0.5	4.3	0.9	4.6	0.6	0.3	0.0	0.0	0.0	0.0	29
30	0.0	0.5	0.5	6.3		3.0	0.5	0.2	0.0	0.0	0.0	0.0	30
31	0.1		0.4	4.9		2.6		0.2		0.0	0.0		31
MEAN	0.1	1.8	0.6	4.0	1.4	3.9	2.2	1.0	0.1	0.0	0.0	0.0	MEAN
MAX.	0.8	17.0	1.6	46.0	3.6	18.0	14.0	4.9	0.3	0.0	0.0	0.0	MAX.
MIN.	0.0	0.0	0.4	0.4	0.9	0.8	0.5	0.2	0.0	0.0	0.0	0.0	MIN.
AC. FT.	4	109	38	248	80	237	133	63	7				AC. FT.

E - ESTIMATED

NR - NO RECORD

* - DISCHARGE MEASUREMENT OR
OBSERVATION OF NO FLOW

- E AND *

MEAN
DISCHARGE
1.3

MAXIMUM			
DISCHARGE	GAGE HT.	MO.	DAY
135	4.28	1	22
			0330

MINIMUM			
DISCHARGE	GAGE HT.	MO.	DAY
0.0		10	1
			0000

TOTAL
ACRE FEET
921

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 42 58	120 11 20	SE34 2S 16E	1720E	5.73	2- 8-60	DEC 58-DATE		1958		0.00	LOCAL

Station located below Dogtown Road Bridge, 0.5 mi. NE of Coulterville. Tributary to Merced River.
Drainage area is 17.0 sq. mi. Altitude of gage is 1740 ft. (from topographic map.)

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	805170	MERCED RIVER BELOW SNELLING

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	34	19	21	17	20	19	28 *	63 *	48	67	77	70	1
2	45	19	21	17	20	18 *	26	67	47	63	76	69	2
3	84	20	21	17	20 *	17	26	79	50 *	66 *	76	69	3
4	26	21	21 *	18	20	18	23	82	49	71	76 *	61 *	4
5	20	24 *	22	21	19	17	18	91	46	68	75	62	5
6	14	28	21	22 *	19	19	16	94	50	67	68	50	6
7	13	24	21	22	19	19	18	94	53	69	69	50	7
8	9.5	23	21	22	22	19	13	77	55	70	66	43	8
9	8.4	22	21	21	22	18	14	73	74	68	69	28	9
10	8.6	23	21	22	26	18	18	68	94	70	71	19	10
11	19	23	20	22	26	19	29	59	82	76	72	9.0	11
12	15	23	19	21	26	23	28	56	79	79	75	19	12
13	12	22	18	21	26	21	26	55	73	79	73	17	13
14	11	25	18	21	25	20	23	71	60	320	72	8.4	14
15	11	33	19	21	22	19	38	70	57	70	75	7.3	15
16	13 *	26	19	20	23	19	54	60	69	61	73	5.0	16
17	15	25	18	20	22	19	62	59	71	58	79	3.4	17
18	15	25	18	21	23	20	53	58	51	53	79	3.0	18
19	14	30	19	21	22	20	61	56	59	56	73	2.7	19
20	14	41	19	21	22	19	70	51	66	54	82	2.5	20
21	14	33	18	29	22	17	70	52	67	52	101	2.2	21
22	13	29	18	38	21	18	70	57	73	51	76	2.1	22
23	14	31	18	36	21	20	75	57	71	59	53	2.1	23
24	14	32	18	27	21	23	80	60	67	62	19	1.9	24
25	15	28	19	24	21	22	69	64	68	73	44	1.7	25
26	15	27	18	24	17	22	67	68	74	68	55	1.5	26
27	15	27	18	23	17	21	68	72	72	65	57	1.5	27
28	15	22	19	21	17	19	68	63	66	75	64	1.5	28
29	17	21	18	21	18	18	64	60	70	75	63	1.5	29
30	20	21	18	21	16	16	62	49	69	79	63	1.3	30
31	17		18	22		15		47		81	65		31
MEAN	18.4	25.6	19.3	22.4	21.3	19.1	44.6	65.5	64.3	75.6	68.9	20.5	MEAN
MAX.	84.0	41.0	22.0	38.0	26.0	23.0	80.0	94.0	94.0	320	101	70.0	MAX.
MIN.	8.4	19.0	18.0	17.0	17.0	15.0	13.0	47.0	46.0	51.0	19.0	1.3	MIN.
AC. FT.	1132	1521	1186	1377	1228	1174	2652	4030	3828	4651	4237	1221	AC. FT.

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # — E AND *

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE FEET
38.9	1530	9.35	7	14	1440	1.3	4.73	9	27	1630	28240

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 30 06	120 27 03	NE17 5S 14E	4910	12.51	5-10-63	NOV 58-DATE		1958		0.00	LOCAL

Station located 0.2 mi. below Merced-Snelling Highway Bridge, 1.4 mi. SW of Snelling. Flow regulated by Exchequer power plant and Lake McClure. Prior to November 1958, records available for a site 3.6 mi. downstream. Altitude of gage is 221 feet, USGS datum.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	805155	MERCED RIVER AT CRESSEY

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	107	75	88	86	104	75	71 *	64	86	72	73	93	1
2	106	76	86	88	102	78 *	70	65	91	71	86	86	2
3	113	76	83	89 *	101 *	81	69	77	76	61	88	97	3
4	145	77	83 *	90	100	81	66	85 *	78 *	63	91 *	93 *	4
5	137	76 *	85	90	100	81	61	93	74	71	75	97	5
6	109	76	85	90	97	84	63	105	70	89 *	89	92	6
7	101	84	86	91	96	92	60	123	76	95	88	85	7
8	89	85	86	92	95	90	57	140	86	88	87	84	8
9	83	82	86	91	94	86	56	125	96	87	82	88	9
10	77	79	86	92	97	82	52	120	122	84	89	85	10
11	94	79	85	91	95	84	53	115	136	88	82	74	11
12	106	78	86	90	92	91	53	103	135	71	72	66	12
13	109	78	85	89	91	92	56	87	126	73	70	60	13
14	101	81	85	92	90	92	64	75	109	69	94	61	14
15	95	91	84	95	90	92	64	65	108	311	98	52	15
16	98 *	100	82	93	95	88	64	57	95	178	99	55	16
17	99	100	85	93	94	82	83	54	95	111	105	58	17
18	102	96	86	95	92	81	91	61	94	93	103	62	18
19	101	97	84	96	93	82	106	57	87	78	100	67	19
20	98	107	84	95	92	82	127	48	75	63	110	65	20
21	94	111	86	103	93	78	122	48	66	63	110	56	21
22	91	111	86	136	93	75	127	58	64	64	120	51	22
23	89	105	83	343	92	79	124	67	67	67	151	44	23
24	86	103	85	215	96	81	114	71	70	59	142	49	24
25	86	104	87	158	87 *	80	113	70	75	58	118	53	25
26	83	101	86	132	86	80	109	75	72	68	81	49	26
27	84	97	89	116	83	80	104	85	63	73	82	45	27
28	85	95	88	112	81	79	89	83	58	69	100	40	28
29	82	94	87	107	80	76	72	96	59	64	99	27	29
30	76	91	86	103		75	70	93	62	59	111	33	30
31	74		86	105		72		90		63	112		31
MEAN	96.8	90.2	85.5	112	93.1	82.3	81.0	82.4	85.7	84.6	97.0	65.6	MEAN
MAX.	145	111	89.0	343	104	92.0	127	140	136	311	151	97.0	MAX.
MIN.	74.0	75.0	82.0	86.0	80.0	72.0	52.0	48.0	58.0	58.0	70.0	27.0	MIN.
AC. FT.	5950	5365	5254	6859	5357	5060	4820	5068	5100	5203	5964	3901	AC. FT.

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # — E AND *

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE FEET
88.0	523	12.40	7	15	1220	25.0	10.35	9	29	1850	63900

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 25 28	120 39 47	SW 9 6S 12E	34400	22.67	12- 4-50	JUL 41-DATE	APR 41-JUL 41	1950		96.24	USCGS

Station located 150 ft. below McSwain Bridge, immediately N of Cressey. Prior to May 20, 1960, station located 250 ft. upstream. Altitude of gage is approximately 85 ft. (USC & GS datum)

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	B08720	ORESTIMBA CREEK NEAR CROWS LANDING

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	6.0	0.8	0.0	0.0	0.0	1.8	5.4	3.5	4.6	3.3	6.9	31	1
2	6.8	4.3	0.0	0.0*	0.0	2.1*	19 *	12	27	4.4	8.2	25	2
3	5.5	13	0.0	0.0	0.0	1.7	6.2	9.3	10	4.1*	11	6.5*	3
4	5.3	23	0.0*	0.0	0.0*	2.3	3.4	14	8.8	4.9	11 *	7.8	4
5	3.9	27	0.0	0.2	0.0	2.9	6.1	18 *	7.9	5.1	13	17	5
6	9.1	21	0.0	0.6	0.0	3.2	8.0	4.9	7.4	4.5	16	11	6
7	12	20	0.0	0.6	0.0	3.8	7.1	3.2	5.9	6.7	25	4.0	7
8	2.6	22 *	0.0	0.5	0.0	2.0	7.4	3.7	7.8*	11	20	28	8
9	2.0	17	0.0	0.4	0.0	2.2	7.3	2.3	18	10	22	4.8	9
10	2.9	6.5	0.0	0.8	0.0	1.5	6.8	1.1	11	11	27	7.7	10
11	3.5	0.6	0.0	0.6	3.3	2.9	7.6	7.6	62	9.9	14	8.2	11
12	6.2	0.4	0.0	0.8	4.6	2.1	6.8	4.8	46	6.7	13	23	12
13	1.9	16	0.0	0.7	4.4	8.7	8.7	4.4	20	6.2	14	4.0	13
14	1.3	9.7	0.0	0.9	4.9	2.5	6.5	2.5	11	5.8	13	4.3	14
15	0.8	4.4	0.0	1.1	4.0	5.0	6.3	6.3	7.4*	6.8	7.3	6.5	15
16	5.2*	1.2	0.0	2.3	5.9	7.2	6.2	1.9	4.3	7.6	7.3	6.2	16
17	2.3	0.2	0.0	1.3*	6.5*	11	6.4	4.8	6.7	8.2	23	6.7	17
18	0.8	0.0	0.0*	0.3	4.7	6.7	5.5	23	24	7.5	16	11	18
19	0.5	0.0	0.0	0.2	3.6	5.2	6.4	27	5.7	7.8	14	7.5	19
20	0.4	0.0	0.0	0.6	4.6	5.5	26	8.0	3.8	25	12	2.6	20
21	0.3	0.0*	0.0	1.1	2.2	6.2	26	16	12	11	12	52	21
22	0.3	0.0	0.0	0.7	3.2	7.5	24	17	21	8.3	9.7	28	22
23	0.3	0.0	0.0	0.2	4.9	22	3.8	5.0	13	8.3	19	5.6	23
24	0.4	0.0	0.0	0.0	4.3	72	21	7.2	7.7	9.5	49	5.4	24
25	0.4	0.0	0.0	0.0	3.5	93	13	32	4.3	12	20	6.3	25
26	0.4	0.0	0.0	0.0	4.3	101	7.5	21	5.4	14	6.9	15	26
27	0.5	0.0	0.0	0.0	3.3	110	5.6	20	4.2	15	22	1.2	27
28	0.6	0.0	0.0	0.0	2.7	57	4.5	20	6.1	21	12	19	28
29	0.6	0.0	0.0	0.0	2.2	36	7.9	17	5.0	6.5	19	6.6	29
30	0.7	0.0	0.0	0.0	28	28	9.3	11	2.4	5.5	4.3	1.8	30
31	0.7	0.0	0.0	0.0	12	12		18		6.2	6.7		31
MEAN	2.7	6.2	0.0	0.4	2.7	20.2	9.5	11.2	14.1	8.8	15.3	12.1	MEAN
MAX.	12.0	27.0	0.0	2.3	6.5	110	26.0	32.0	62.0	25.0	49.0	52.0	MAX.
MIN.	0.3	0.0	0.0	0.0	0.0	1.5	3.4	1.1	2.4	3.3	4.3	1.2	MIN.
AC. FT.	167	371		28	153	1240	567	687	837	543	941	721	AC. FT.

E - ESTIMATED
 NR - NO RECORD
 * - DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # - E AND *

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE FEET
8.6	122	2.96	3	27	1150	0.0		11	18	0000	6254

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE		
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO	
37 24 59	121 00 45	SW 8 6S 9E	2650E	12.08	2- 1-63	DEC 57-DATE		1957		0.00 LOCAL

Station located 0.1 mi. below River Road Bridge, 3.7 mi. NE of Crows Landing. This includes drainage returned to San Joaquin River. Daily flows are estimated during periods of backwater from San Joaquin River. Altitude of gage is approximately 50 feet (from USGS topographic map).

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	B07080	SAN JOAQUIN RIVER AT GRAYSON

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	695	545	705	570	620	380	500	380	475	320	245	435	1
2	635	525	705	570	605	365	555	385	465	330	235	470	2
3	600	535	705	580	605	350	510	395	490	335	280	480	3
4	645	535	765	570	600	360	510	460	465	320	275	440	4
5	755	555	765	575	600	335	445	480	440	345	280	425	5
6	850	570	765	600	580	330	450	490	425	350	265	455	6
7	1000	550	765	655	570	350	415	495	420	305	250	465	7
8	1300	545	765	740	555	345	400	510	420	310	250	420	8
9	940	555	765	785	535	355	365	510	490	285	270	375	9
10	870	540	765	760	510	355	330	455	540	270	275	360	10
11	910	525	765	745	500	330	315	480	610	260	240	330	11
12	1020	510	725	725	500	365	290	460	625	255	250	345	12
13	1260	510	725	710	490	455	290	425	610	250	240	370	13
14	1700	520	730	705	480	440	290	430	630	245	250	360	14
15	1600	540	715	700	475	415	310	400	610	230	250	330	15
16	1560	555	700	685	460	430	335	360	555	245	260	355	16
17	1010	570	700	680	480	410	330	385	490	285	300	360	17
18	1080	600	695	655	460	395	335	390	470	315	350	345	18
19	1030	640	680	635	445	370	405	430	425	320	330	350	19
20	1060	720	665	630	435	360	470	455	420	315	280	360	20
21	1480	760	655	655	425	305	485	460	440	305	290	365	21
22	1510	755	640	695	410	325	495	455	445	290	275	405	22
23	1260	805	625	715	410	490	470	430	390	260	345	410	23
24	1070	865	625	740	400	535	440	440	335	220	410	535	24
25	925	860	670	775	405	595	485	470	330	230	405	705	25
26	770	860	680	775	395	570	480	470	330	245	365	725	26
27	670	860	695	725	375	550	480	480	320	290	345	765	27
28	615	860	610	695	360	560	455	490	305	290	350	750	28
29	585	880	595	665	355	525	415	550	365	280	335	735	29
30	580	885	570	630		570	390	510	340	230	365	735	30
31	580		570	630		525		490		235	390		31
MEAN	986	651	694	677	484	421	418	452	456	283	299	465	MEAN
MAX.	1700	885	765	785	620	595	555	550	630	350	410	765	MAX.
MIN.	580	510	570	570	355	305	290	360	305	220	235	330	MIN.
AC. FT.	60625	38747	42655	41603	27848	25874	24883	27808	27124	17385	18387	27689	AC. FT.

E - ESTIMATED

NR - NO RECORD

* - DISCHARGE MEASUREMENT OR
OBSERVATION OF NO FLOW

H - E AND *

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE FEET
524											380628

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 33 47	121 09 06	NW25 4S 7E	23900	45.15	3- 8-41	JUL 28-DATE		1960	1959	0.00	USED
								1960		0.00	USCGS
										3.81	USED

Station located at Laird Slough Bridge, 5 mi. above the Tuolumne River. High flows bypassing this station through old channel of San Joaquin River are included in figures shown.
Records furnished by City of San Francisco.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	804175	TUOLUMNE RIVER AT LAGRANGE BRIDGE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	175	1400	2800	1590	616	27	13	13	3.1	1.6	1.1	4.7	1
2	184	1440	2750	1660	530	23 *	16 *	12	3.3	2.7*	8.9	4.4*	2
3	192	1420	2410 *	1190	580 *	17	16	13	2.9*	2.7	8.3*	4.7	3
4	192	1460 *	2400	1400	645	16	9.8	13 *	3.5	1.7	11	4.0	4
5	193	1470	2420	1430	637	16	9.5	11	3.5	6.7	11	4.7	5
6	8.5	1460	2460	1480 *	656	15	9.8	12	4.0	5.5	12	4.2	6
7	187	1460	2400	1400	656	16	9.8	11	2.0	2.1	11	4.2	7
8	190	1470	2410	957	646	13	9.7	7.1	2.6	2.3	11	4.8	8
9	190	1490	2400	735	457	13	11	3.8	2.9	4.5	11	12	9
10	191	1480	2220	728	565	15	14	3.0	1.9	4.1	11	16	10
11	194	1510	2260	528	649	14	11	1.3	1.4	3.5	12	4.4	11
12	195	1540	2240	505	671	16	11	1.2	17	2.7	12	2.8	12
13	6.9	1560	2310	649	807	15	10	1.8	14	1.2	12	2.0	13
14	184	1580	2050	647	678	15	11	1.4	7.6	1.1	12	1.7	14
15	265	1670	2070	684	649	15	16	1.7	2.1	6.6	12	3.8	15
16	741	1860	2200	597	470	14	13	2.4	1.1	9.8	16	5.6	16
17	869	1860	2110	605	579	15	12	2.6	35	2.4	14	4.5	17
18	881	2030	2010	546	536	18	26	2.2	4.8	2.6	14	2.0	18
19	1230	2200	1870	540	348	14	13	16	1.9	0.2	13	1.6	19
20	1350	2280	1890	509	347	15	11	4.5	2.3	0.1	47	1.4	20
21	1710	2170	1860	787	354	16	16	2.7	1.7	0.0	13	1.2	21
22	1730 *	2340	1870	719	351	18	15	2.0	1.6	0.4	7.6	1.7	22
23	1720	2410	2090	618	305	16	12	2.0	3.3	1.3	3.9	4.1	23
24	1570	2400	2430	583	362	17	12	2.0	7.3	6.4	3.5	9.3	24
25	1120	2380	2370	576	443	16	12	2.3	3.7	10	24	5.5	25
26	1130	2440	2380	502	179	27	12	3.6	1.8	0.4	6.8	1.9	26
27	980	2540	1660	546	33	17	12	3.5	1.5	0.0	3.7	1.8	27
28	1170	2720	1640	616	54	24	12	3.2	1.4	0.0	3.4	1.1	28
29	1200	2710	1550	624	36	17	12	3.0	1.5	0.3	3.5	1.3	29
30	1210	2780	1470	779	15	15	13	3.3	1.5	1.1	3.4	0.6	30
31	1210		1730	632		18		3.5		0.0	3.6		31
MEAN	722	1918	2153	818	477	16.9	12.7	5.3	4.7	2.7	10.9	4.1	MEAN
MAX.	1730	2780	2800	1660	807	27.0	26.0	16.0	35.0	10.0	47.0	16.0	MAX.
MIN.	6.9	1400	1470	502	33.0	13.0	9.5	1.2	1.1	0.0	1.1	0.6	MIN.
AC. FT.	44370	114100	132400	50310	27450	1037	755	327	282	167	668	242	AC. FT.

E - ESTIMATED

NR - NO RECORD

* - DISCHARGE MEASUREMENT OR
OBSERVATION OF NO FLOW

- E AND *

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE FEET
512	2920	72.31	12	11	2020	0.0		7	20	2400	372100

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 39 59	120 27 40	NW20 3S 14E	48200	188.0	12- 8-50	OCT 36-SEP 60 OCT 61-DATE		1937		0.00	USGS

Station located at highway bridge, immediately N of La Grange. Flow regulated by reservoirs and power plants. Drainage area is 1,540 sq. mi. Altitude of gage is approximately 175 feet (from USGS topographic map.)

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE
 (IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	804165	TUOLUMNE RIVER AT ROBERTS FERRY BRIDGE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	61	1490	3040	1810	779	75	62	45	29	31	26	36	1
2	208	1590	3070	1840	701	67	58	46	36	30	27	31	2
3	233	1600	2690	1410	681	58	53	49	34	29	27	31	3
4	233	1610	2650	1570	774	51	57	52	37	29	27	33	4
5	231	1640	2670	1480	771	51	55	50	40	32	27	31	5
6	140	1660	2700	1480	774	52	51	55	39	33	29	34	6
7	94	1650	2660	1430	785	52	45	51	40	33	35	35	7
8	219	1660	2650	1290	770	48	45	50	42	31	36	32	8
9	225	1670	2650	845	636	46	44	50	46	31	37	30	9
10	230	1680	2420	845	613	46	45	45	42	31	35	28	10
11	251	1720	2410	755	733	45	46	43	43	28	35	29	11
12	232	1760	2430	622	728	52	49	39	47	27	33	29	12
13	139	1770	2510	626	815	53	50	36	45	27	33	30	13
14	98	1800	2250	775	850	49	51	31	44	30	38	30	14
15	249	1880	2260	780	765	49	45	32	46	30	41	26	15
16	642	2110	2330	744	599	48	49	33	46	29	43	27	16
17	1050	2110	2290	721	610	46	47	34	42	27	43	27	17
18	1050	2180	2180	720	668	45	49	33	44	25	39	31	18
19	1230	2430	2070	650	444	46	59	31	46	26	41	32	19
20	1470	2560	2080	635	409	46	51	31	44	29	46	31	20
21	1790	2410	2090	701	412	46	43	33	43	29	68	28	21
22	1860	2610	2060	948	404	50	43	36	36	28	49	29	22
23	1870	2680	2170	823	364	56	43	39	35	27	46	28	23
24	1840	2670	2570	750	350	53	43	36	37	28	42	28	24
25	1300	2650	2510	718	468	53	40	36	33	29	39	30	25
26	1320	2700	2630	686	426	54	38	36	32	30	37	35	26
27	1170	2770	1840	602	113	59	38	34	33	29	36	33	27
28	1290	2980	1810	723	84	56	42	34	34	28	37	32	28
29	1370	2960	1730	761	110	59	36	31	32	27	36	31	29
30	1360	3040	1650	819		56	39	30	32	28	35	28	30
31	1370		1830	872		54		32		27	38		31
MEAN	801	2135	2352	949	574	52.3	47.2	39.1	39.3	29.0	37.5	30.5	MEAN
MAX.	1870	3040	3070	1840	850	75.0	62.0	55.0	47.0	33.0	68.0	36.0	MAX.
MIN.	61.0	1490	1650	602	84.0	45.0	36.0	30.0	29.0	25.0	26.0	26.0	MIN.
AC. FT.	49240	127000	144600	58380	33000	3215	2809	2406	2339	1781	2303	1815	AC. FT.

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 H — E AND *

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE FEET
590	3080	13.12	12	2	2030	03.0	8.58	10	1	1640	428900

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 38 08	120 37 03	NW35 3S 12E	49800	128.2	12- 8-50	JUL 28-OCT 36 JAN 37-FEB 38 JUN 38-DATE		1930 1940	1940	106.20 0.00	USCGS USCGS

Station located at highway bridge, 7.5 mi. E of Waterford. Flow regulated by reservoirs and power plants.
 Altitude of gage is approximately 110 feet (from USGS topographic map.)

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	804150	TUOLUMNE RIVER AT HICKMAN BRIDGE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	83	1600	2770	1780	718	160	117	101	67	74	70	97	1
2	317	1710	2810	1830	653	149 *	114 *	108	69	77 *	69	92 *	2
3	370	1710	2480	1450	610 *	141	112	113	77 *	79	65 *	93	3
4	382	1700 *	2430	1630	724	130	119	111 *	75	75	53	99	4
5	399	1720	2450	1500	725	126	115	109	77	80	55	93	5
6	363	1740	2510	1490 *	725	128	110	120	78	82	56	94	6
7	158	1700	2490	1520	739	126	101	122	77	78	63	101	7
8	361	1710	2480	1460	731	123	98	118	84	77	68	101	8
9	388	1700	2490	941	668	118	99	118	102	80	62	94	9
10	385	1680	2280	917	539	115	94	114	88	80	55	98	10
11	586	1690	2240	856	710	118	95	112	84	77	51	97	11
12	594	1730	2280	697	714	121	96	100	86	72	50	101	12
13	532	1740	2350	680	771	122	102	98	84	72	50	99	13
14	208	1740	2150	847	862	120	99	92	82	69	55	101	14
15	417	1810	2110	826	758	116	92	85	84	75	58	96	15
16	653	1970	2200	802	645	113	91	90	89	78	65	94	16
17	1150	1980	2150	767	590	115	94	89	92	74	70	94	17
18	1190	2000	2080	761	701	108	93	82	93	70	62	93	18
19	1300	2310	1920	692	502	112	108	80	104	65	55	100	19
20	1610	2450	1930	682	442	111	107	79	95	74	62 E	100	20
21	1880	2300	1960	711	441	114	98	84	95	78	63 E	93	21
22	2000 *	2480	1930	988	441	119	94	86	88	69	69 E	90	22
23	1950	2540	2020	850	415	123	97	87	79	66	74 E	91	23
24	1960	2550	2480	762	388	119	94	92	72	72	81 E	85	24
25	1480	2510	2450	718	505	117	95	99	76	67	97 E	87	25
26	1480	2530	2600	694	530	117	92	100	70	71	88	94	26
27	1350	2550	1810	584	260	120	92	94	69	76	88	96	27
28	1360	2750	1790	705	278	115	92	93	70	73	95	97	28
29	1500	2730	1650	727	249	112	91	95	73	67	93	94	29
30	1480	2780	1590	729		110	94	83	76	69	92	91	30
31	1490		1770	834		107		69		73	98		31
MEAN	948	2070	2215	982	587	121	99.8	97.5	81.8	73.8	68.8	95.2	MEAN
MAX.	2000	2780	2810	1830	862	160	119	122	104	82.0	98.0	101	MAX.
MIN.	83.0	1600	1590	584	249	107	91.0	69.0	67.0	65.0	50.0	85.0	MIN.
AC. FT.	58270	123200	136200	60360	33790	7428	5940	5996	4869	4540	4229	5663	AC. FT.

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 H — E AND *

MEAN	MAXIMUM	MINIMUM	TOTAL
DISCHARGE	DISCHARGE	DISCHARGE	ACRE FEET
620	2870	42.0	450400
	GAGE HT. 76.12	GAGE HT. 71.36	
	MO. 12 DAY 26 TIME 1340	MO. 8 DAY 12 TIME 2150	

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE		
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO	
37 38 10	120 45 14	NW34 3S 11E	59000	96.2	12- 8-50	JUL 32-OCT 36 JAN 37-MAR 37 JUL 37-FEB 38 JUL 38-DEC 38 MAR 39-DATE		1932		0.00 USC&S

Station located at Hickman-Waterford Road Bridge, immediately S of Waterford. Flow regulated by reservoirs and power plants. Altitude of gage is approximately 80 feet, USC&S Datum. In August 1964 this station was moved approximately one-quarter mile downstream to a point immediately upstream of the new Hickman-Waterford Road Bridge.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	B04130	DRY CREEK NEAR MODESTO

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	59	20	20	16	33	13	53	78	46	40	30	61	1
2	60	20	20	16	29	14 *	67 *	83	51	39 *	31	57	2
3	62	19	19 *	16	25	16	53	85	48	33	34 *	52	3
4	66	19 *	19	16	23	15	34	92	47	29	28	53 *	4
5	77	20	19	16	20 *	19	32	82 *	46	29	28	42	5
6	80	21	19	16 *	19	31	29	89	53	35	28	44	6
7	75	21	19	16	18	51	30	86	51	32	25	43	7
8	69	21	19	17	17	50	32	61	52 *	24	27	47	8
9	69	21	19	16	18	59	44	49	58	26	33	50	9
10	78	21	19	16	17	59	43	43	71	26	38	51	10
11	110	20	19	15	16	51	46	44	53	33	33	53	11
12	236	20	19	16	15	50	50	44	43	30	30	51	12
13	124	20	18	16	15	46	49	45	47	29	27	43	13
14	74	22	18	17	15	35	48	53	46	27	30	47	14
15	58	29	19	16	16	29	61	47	46	27	30	42	15
16	54 *	30	18	16	16	20	63	39	53	24	27	47	16
17	51	30	18	17	16	27	54	36	54	30	36	43	17
18	42	29	18	17	17	26	60	41	55	30	38	42	18
19	37	30	18	16	16	27	62	42	55	28	33	47	19
20	32	34	18	20	16	29	75	44	62	33	38	45	20
21	28	45	17	30	15	37	68	44	57	30	43	43	21
22	25	42	17	213	16	54	71	44	51	36	38	45	22
23	24	31	17	779	16	89	73	46	43	29	39	43	23
24	23	32	17	227 *	15	59	76	49	41	29	40	47	24
25	23	38	17	128	14	42	78	48	43	30	31	47	25
26	21	30	17	88	13	31	81	47	38	29	28	46	26
27	20	25	17	68	12	27	88	46	37	30	34	43	27
28	20	22	17	56	12	26	72	51	31	35	37	50	28
29	20	20	17	47	14	25	59	49	35	33	37	57	29
30	21	20	17	42		23	60	51	36	37	44	57	30
31	20		17	38		27		50		33	52		31
MEAN	56.7	25.7	18.1	65.9	17.4	35.7	57.0	55.1	48.3	30.8	33.8	47.9	MEAN
MAX.	236	45.0	20.0	779	33.0	89.0	88.0	92.0	71.0	40.0	52.0	61.0	MAX.
MIN.	20.0	19.0	17.0	15.0	12.0	13.0	29.0	36.0	31.0	24.0	25.0	42.0	MIN.
AC. FT.	3487	1531	1115	4052	1000	2196	3394	3388	2874	1894	2077	2852	AC. FT.

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # — E AND *

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE FEET
41.1	1060	75.53	1	23	0700	10.0	67.55	2	28	0650	29860

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE		
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE
			C.F.S.	GAGE HT.	DATE			FROM	TO	
37 39 26	120 55 19	SE24 3S 9E	7710	88.04	12-23-55	MAR 41-DATE		1941		0.00
										USCGS

Station located 0.1 mi. below Claus Road Bridge, 4 mi. E of Modesto. Tributary to Tuolumne River. Prior to Mar. 1941, records available for a site 2.5 mi. downstream. This is a Department of Water Resources-Modesto Irrigation District cooperative station. Altitude of gage is approximately 80 feet. USC & GS datum.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	804105	TUOLUMNE RIVER AT TUOLUMNE CITY

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	370	1700	2850	1930	845	345	300	270	240	230	200	260	1
2	370	1800	2860	1900	770	335	320	280	230	230	200	255	2
3	460	1860	2870	1930	720	330	305	285	235	230	195	240	3
4	530	1880	2650	1640	700	325	300	295	230	230	190	235	4
5	555	1890	2610	1720	755	315	300	290	225	225	195	240	5
6	595	1910	2630	1670	755	310	300	300	230	225	185	240	6
7	555	1910	2650	1720	755	325	290	300	245	230	180	230	7
8	435	1900	2620	1640	760	325	285	290	250	220	190	225	8
9	545	1900	2620	1470	745	325	275	270	265	200	205	230	9
10	585	1910	2600	1180	780	330	270	260	260	205	200	235	10
11	715	1900	2470	1110	660	325	265	255	255	205	200	240	11
12	970	1910	2440	1000	735	340	270	250	240	205	200	240	12
13	1010	1940	2440	905	745	340	265	245	240	200	200	245	13
14	855	1960	2480	915	805	315	265	235	245	200	200	235	14
15	645	2010	2320	970	815	315	260	235	240	190	215	245	15
16	725	2050	2280	970	760	300	265	240	250	185	225	255	16
17	915	2170	2350	935	670	290	260	245	250	185	205	250	17
18	1280	2190	2290	905	670	290	260	245	250	190	200	245	18
19	1320	2270	2230	870	695	295	260	240	245	200	200	240	19
20	1510	2500	2150	830	540	295	265	240	245	200	200	250	20
21	1750	2560	2140	880	535	290	275	235	250	200	210	240	21
22	2030	2480	2140	1000	530	310	275	230	245	195	220	235	22
23	2130	2620	2120	1530	520	330	275	235	230	205	225	235	23
24	2130	2660	2240	1350	490	330	275	235	225	200	220	230	24
25	2080	2650	2510	1010	485	320	265	235	225	195	210	235	25
26	1700	2630	2530	900	545	310	265	230	225	200	205	240	26
27	1660	2650	2510	810	530	305	280	225	230	195	210	240	27
28	1550	2680	2040	745	390	300	275	230	230	185	215	235	28
29	1610	2800	1960	795	350	300	270	230	225	180	210	255	29
30	1680	2800	1860	800		295	265	240	235	185	220	285	30
31	1690		1810	825		285		240		190	240		31
MEAN	1128	2203	2396	1189	657	314	277	253	240	204	205	242	MEAN
MAX.	2130	2800	2870	1930	845	345	320	300	265	230	240	285	MAX.
MIN.	370	1700	1810	745	350	285	260	225	225	180	180	225	MIN.
AC. FT.	69332	131088	147312	73101	37795	19329	16463	15540	14261	12526	12635	14410	AC. FT.

E - ESTIMATED
 NR - NO RECORD
 * - DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 H - E AHD *

MEAN
DISCHARGE
776

MAXIMUM			
DISCHARGE	GAGE HT.	MO.	DAY TIME

MINIMUM			
DISCHARGE	GAGE HT.	MO.	DAY TIME

TOTAL
ACRE FEET
563792

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE		
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B. & B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO	
37 36 12	121 07 50	NW 7 4S 8E				30-DATE				
								1960	1959	0.00
								1960		0.00
										3.50
										USED
										USCGS
										USED

Station located at highway bridge, 3.35 mi. above mouth. Backwater at times, from the San Joaquin River, affects the stage-discharge relationship. Records furnished by City of San Francisco.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE
 (IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	B07060	SAN JOAQUIN RIVER AT HETCH HETCHY AQUEDUCT CROSSING

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	1070	2155	3285	2385	1665	615	765	615	630	480	335	799	1
2	1025	2130	3295	2415	1595	615	810	660	570	480	345	790	2
3	1050	2200	3275	2430	1545	575	775	685	565	490	390	770	3
4	1160	2220	3115	2280	1500	560	700	740	525	485	370	706	4
5	1310	2245	3000	2250	1535	525	700	765	520	485	340	657	5
6	1575	2285	2975	2245	1540	505	665	810	495	525	325	690	6
7	1865	2275	2975	2285	1530	570	590	780	505	480	305	719	7
8	2035	2260	2955	2350	1505	570	595	745	555	440	310	667	8
9	1785	2275	2955	2335	1435	570	575	685	695	410	340	626	9
10	1680	2275	2965	2080	1375	580	520	640	785	395	380	581	10
11	1790	2250	2880	1975	1260	560	515	630	790	385	330	575	11
12	2175	2245	2820	1905	1295	585	540	580	805	390	340	598	12
13	2490	2260	2825	1780	1315	690	520	530	740	395	345	623	13
14	2755	2275	2835	1740	1320	670	500	510	725	365	335	633	14
15	2840	2315	2760	1790	1360	640	500	495	720	325	370	579	15
16	2445	2360	2685	1775	1290	625	530	485	640	295	410	582	16
17	2330	2345	2700	1760	1255	575	540	495	580	345	505	567	17
18	2485	3140	2710	1660	1185	585	540	520	530	380	525	582	18
19	2520	2565	2650	1570	1205	630	565	575	510	420	538	577	19
20	2515	2820	2586	1570	1090	650	665	585	480	420	493	616	20
21	2965	2950	2595	1640	990	610	660	630	490	405	462	632	21
22	3340	2910	2630	1700	945	630	660	625	520	390	476	702	22
23	3850	3005	2620	2145	935	855	660	590	480	390	540	772	23
24	3000	3115	2635	2300	895	890	630	575	435	345	611	913	24
25	2950	3125	2885	2000	840	900	640	635	435	325	607	1070	25
26	2580	3115	3030	1875	860	875	685	650	420	365	574	1100	26
27	2325	3125	3040	1780	860	840	705	640	435	385	545	1170	27
28	2165	3140	2680	1655	725	805	690	620	480	380	592	1200	28
29	2140	3225	2515	1655	605	775	630	645	485	330	582	1100	29
30	2195	3855	2410	1650		780	605	680	505	295	625	1110	30
31	2200		2355	1620		740		650		280	707		31
MEAN	2213	2615	2827	1955	1223	664	623	628	550	396	450	757	MEAN
MAX.	3850	3855	3295	2430	1665	900	810	810	805	525	707	1200	MAX.
MIN.	1025	2130	2355	1570	605	505	500	485	420	280	305	567	MIN.
AC. FT.	136086	155623	173821	120198	70324	40850	37041	38618	33818	24357	27670	45040	AC. FT.

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # — E AND *
 a — See note (a) below.

MEAN DISCHARGE
1242

MAXIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

MINIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

TOTAL ACRE FEET
903446

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B.B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 38 10	121 12 54	NE32 3S 7E	38400	38.43	4- 2-40	MAR 33-DATE		1960	1959	0.00	USED
								1960		0.00	USCGS
										3.51	USED

Station located 2.9 mi. above the mouth of the Stanislaus River. Records furnished by City of San Francisco.

(a) Daily mean discharge from August 19 through September 30, 1964, computed from San Joaquin River at Maze Road Bridge gage height record by Department of Water Resources.

TABLE B-4 (Cont.)

WATER YEAR	STATION NO.	STATION NAME
1964	803175	STANISLAUS RIVER AT ORANGE BLOSSOM BRIDGE

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	94	146	170	770	854	85	182	34	30	23	24	31	1
2	92	144	269	770	853	71	168 *	33	30	21 *	25	28 *	2
3	92	139	181 *	779	850	70 *	121 *	36	32	20 *	27 *	29 *	3
4	93	144 *	183	779	855 *	71	116	36 *	29 *	22	27	23	4
5	95	153	185	775	858	73	113	31	26	30	30	26	5
6	91	154	183	781	852	79	117	37	26	26	32	21	6
7	91	165	181	773 *	842	85	126	36	31	22	39	18	7
8	97	171	184	779	197	85	147	28	32	22	30	18	8
9	95	159	194	778	188	83	123	28	36	20	28	19	9
10	93	164	182	781	168	86	75	28	31	20	27	20	10
11	149	156	174	776	162	86	68	24	27	23	29	21	11
12	683	159	161	781	177	83	79	30	25	25	30	20	12
13	633	158	175	780	163	81	83	25	26	22	32	23	13
14	601	161	180	771	131	75	60	27	31	21	35	20	14
15	617	164	156	777	97	74	40	28	28	23	32	20	15
16	606	183	167	657	90	77	41	25	27	30	30	28	16
17	610	159	176	354	86	80	35	27	26	25	30	21	17
18	199	182	157	544	84	80	39	23	28	25	33	19	18
19	94	166	560	539	84	78	39	23	31	23	28	19	19
20	115	230	777	542	83	78	35	24	29	26	27	21	20
21	125 *	178	775	757	82	80	36	27	29	23	26	21	21
22	141	208	775	1210	81	81	39	27	29	22	28	23	22
23	149	194	775	871	81	78	35	29	30	24	30	25	23
24	145	210	777	849	83	76	37	27	33	22	31	20	24
25	142	189	775	848	80	76	38	24	28	25	28	18	25
26	153	186	776	840	80	75	35	27	25	24	25	21	26
27	152	161	764	836	76	77	36	35	24	29	27	22	27
28	132	172	746	837	80	78	41	33	25	27	26	23	28
29	135	176	773	838	80	82	39	29	22	26	29	25	29
30	146	178	777	837		82	34	28	25	26	26	21	30
31	142		734	845		97		27		24	27		31
MEAN	219	170	421	770	283	79.4	72.6	28.9	28.4	23.9	29.0	22.1	MEAN
MAX.	683	230	777	1210	858	97.0	182	37.0	36.0	30.0	39.0	31.0	MAX.
MIN.	91.0	139	156	354	76.0	70.0	34.0	23.0	22.0	20.0	24.0	18.0	MIN.
AC. FT.	13490	10130	25870	47310	16260	4883	4318	1777	1688	1470	1781	1317	AC. FT.

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # — E AND *

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE FEET
179	1640	5.28	1	22	0650	17.0	1.31	9	7	1740	130300

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 47 18	120 45 41	SW 4 2S 11E	52000	30.05	11-21-50	JUN 28-DEC 39 APR 40-DATE				0.00	LOCAL

Station located at bridge, 5.0 mi. E of Oakdale. Flow regulated by reservoirs and power plants.
 Drainage area, 1,020 sq. mi. Altitude of gage is approximately 70 feet (from U.S.G.S. topographic map).

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	803145	STANISLAUS RIVER AT RIVERBANK

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	170	207	211	809	904	128	188	72	45	62	74	80	1
2	167	211	215	848	900	128	153 *	71	47	59 *	67	77 *	2
3	162	211	310	853	904	119 *	108	71	41	62	73 *	73	3
4	165	209 *	224	849	903 *	116	96	71 *	41 *	61	63	76	4
5	169	217	226	840	906	124	96	71	39	67	65	72	5
6	163	222	226	840	898	131	94	73	36	70	65	75	6
7	168	219	219	846 *	880	144	98	73	41	67	66	72	7
8	166	229	222	845	391	140	103	67	46	73	75	63	8
9	170	225	230	850	259	133	105	56	54	66	70	67	9
10	173	224	245	853	244	136	100	53	56	63	71	62	10
11	234	221	231	850	226	146	83	52	48	64	68	64	11
12	579	216	216	849	224	173	83	52	48	72	74	66	12
13	772	215	211	856	230	122	91	52	48	71	80	68	13
14	728	216	224	854	200	113	83	49	52	72	82	75	14
15	727	225	217	855	177	114	67	47	55	69	80	71	15
16	738	225	197	846	152	123	61	47	58	70	77	69	16
17	735	231	217	488	146	114	61	50	57	72	80	75	17
18	559	218	216	559	144	115	62	46	57	71	78	73	18
19	199	230	320	596	143	109	62	45	56	67	78	68	19
20	164	263	818	596	141	115	62	43	52	77	69	69	20
21	177 *	290	853	686	139	114	62	42	57	78	67	72	21
22	189	245	853	1220	139	125	61	43	60	65	70	77	22
23	207	249	853	1020	136	159	63	52	51	67	78	82	23
24	204	259	852	933	132	118	60	50	59	66	77	79	24
25	199	247	847	917	130	112	59	45	62	63	75	75	25
26	207	231	846	907	125	109	68	42	54	74	69	75	26
27	211	223	853	903	125	103	73	44	48	72	66	73	27
28	201	205	811	902	124	105	74	47	62	69	74	77	28
29	185	217	847	897	128	112	81	41	59	74	75	79	29
30	203	216	845	902	120	120	74	43	58	72	77	77	30
31	205		837	901	116	116		44		71	69		31
MEAN	300	227	468	838	350	124	84.4	53.4	51.6	68.6	72.6	72.7	MEAN
MAX.	772	290	853	1220	906	173	188	73.0	62.0	78.0	82.0	82.0	MAX.
MIN.	162	205	197	488	124	103	59.0	41.0	36.0	59.0	63.0	62.0	MIN.
AC. FT.	18440	13520	28740	51510	20130	7609	5020	3281	3068	4221	4467	4326	AC. FT.

E - ESTIMATED

NR - NO RECORD

* - DISCHARGE MEASUREMENT OR
OBSERVATION OF NO FLOW

- E AND *

MEAN
DISCHARGE
226

MAXIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME
1520	77.47	1	22	1500

MINIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME
34.0	72.4	6	6	1520

TOTAL
ACRE FEET
164300

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B.B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
34 44 31	120 56 21	SW24 2S 9E	85800	103.18	12-23-55	JUL 40-DATE		1940		0.00	USCGS

Station located at Burneyville Bridge, immediately N of Riverbank. Drainage area 1,055 sq. mi.

TABLE B-4 (Cont.)

WATER YEAR	STATION NO.	STATION NAME
1964	803115	STANISLAUS RIVER AT KOETITZ RANCH

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	324	281	303	858	922	185	258	120	131	95	106	151 *	1
2	327	278	296	868	917	187	315 *	110	122	98	112	152	2
3	363	279	311 *	883	915	182 *	269	117	136	108	91 *	160	3
4	343	280 *	348	887	913 *	170	217	137 *	120 *	124	102	154	4
5	319	281	311	889	916	157	225	140	124	145	116	134	5
6	302	290	304	889	918	160	212	162	118	132 *	108	128	6
7	321	290	300	888 *	915	171	178	139	126	132	95	127	7
8	324	289	298	889	824	191	169	149	138	149	96	123	8
9	307	293	298	889	501	201	179	134	192	139	117	121	9
10	313	291	303	890	400	186	193	129	180	125	153	127	10
11	440	288	310	890	359	189	187	111	198	106	149	120	11
12	552	288	300	890	330	210	189	107	175	117	144	110	12
13	742	286	291	887	321	215	178	113	148	124	122	108	13
14	816	287	285	890	314	184	174	106	137	126	116	119	14
15	832	291	292	885	287	175	171	110	134	131	108	134	15
16	823	289	284	883	262	171	155	92	134	125	126	140	16
17	784	295	273	823	242	172	137	96	136	123	109	136	17
18	753	295	280	579	229	243	156	121	131	111	112	147	18
19	563	293	277	633	218	233	156	111	122	118	125	150	19
20	365	313	401	645	211	209	153	105	131	116	109	147	20
21	308 *	348	708	660	207	233	143	110	143	120	114	169	21
22	290	350	796	798	204	225	135	106	133	119	118	178	22
23	291	329	826	1120	197	303	134	108	128	108	134	175	23
24	293	340	846	1020	196	250	122	118	109	112	134	171	24
25	289	349	849	951	194	227	122	127	109	112	109	168	25
26	285	329	848	932	186	218	130	120	115	118	108	183	26
27	291	312	856	926	179	217	143	126	108	115	93	189	27
28	291	300	862	919	184	204	134	120	107	100	91	182	28
29	280	290	847	919	182	214	118	119	112	98	105	153	29
30	274	294	869	919		212	116	131	124	94	119	158	30
31	281		877	921		213		135		107	128		31
MEAN	422	301	492	868	436	204	172	120	134	118	115	147	MEAN
MAX.	832	350	877	1120	922	303	315	162	198	149	153	189	MAX.
MIN.	274	278	273	579	179	157	116	92.0	107	94.0	91.0	108	MIN.
AC.FT.	25960	17890	30250	53400	25080	12510	10250	7396	7976	7234	7079	8755	AC.FT.

E - ESTIMATED
 NR - NO RECORD
 * - DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # - E AND *

MEAN	MAXIMUM	MINIMUM	TOTAL
DISCHARGE 294	DISCHARGE 1170	GAGE HT. 33.09	MO. DAY TIME 1 23 1440
	DISCHARGE 79.0	GAGE HT. 26.53	MO. DAY TIME 7 1 2400
			ACRE FEET 213800

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 41 57	121 10 08	SW 2 3S 7E				OCT 62-DATE	MAR 50-SEP 62	1950	1951	0.00	USED
								1951		0.00	USCGS
								1951		3.60	USED

Station located 0.6 mi. NW of Bacon and Gates Road Junction, 3.7 mi. SW of Ripon.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	807020	SAN JOAQUIN RIVER NEAR VERNALIS

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	1440 E	2550	3900	3300	2600	800 E	1120	672	690	493	274	911	1
2	1420 E	2480	3920 *	3330	2530	760 E	1200 *	704	601	461	320	930	2
3	1400 E	2570	3910	3350	2500	720 E	1170	736	589	457	340	898 *	3
4	1440 E	2600	3810	3250	2450 *	695 *	925	785	569 *	465	334 *	880 *	4
5	1630 E	2610	3620	3190	2480	695	862	834 *	557	517	320	834	5
6	1920	2660	3560	3180	2480	722	844	888	537	557	320	821	6
7	2190	2660	3550	3200	2470	785	740	935	569	513 *	267	857	7
8	2470	2640	3530	3280 *	2440	826	686	898	628	437	274	821	8
9	2220	2640	3540	3290	2000 E	839	677	850 E	848	445	306	780	9
10	2050	2650	3540	3050	1800 E	816	659	800 E	1060	393	373	718	10
11	2230 *	2640	3490	2910	1600 E	776	659	700 E	1080	397	344	704	11
12	2720	2630 *	3400	2840	1600 E	821	672	632	1060	377	316	708	12
13	3140	2630	3400	2710	1650 E	970	636	581	960	405	330	704	13
14	3470	2640	3410	2650	1650 E	960	589	561	852	337	302	749	14
15	3660	2690	3370	2700	1700 E	880	561	501	848	288	330	740	15
16	3310	2740	3260	2680	1600 E	830	614	505	776	253	377	704	16
17	3120	2800	3260	2680	1500 E	767	593 *	505	708	306	501	700	17
18	3200	2920	3280	2450	1400 E	762	589	561	614	340	489	700	18
19	3210	2980	3230	2360	1500 E	902	597	654	577 *	397	521	704	19
20	3040	3220	3150	2350	1400 E	893	749	650	521	409	485	722	20
21	3290	3420	3350	2410	1200 E	888	780	672	541	369	429	776	21
22	3680	3430	3490	2510	1200 E	898	767	672	593	358	457	790	22
23	3670	3530	3510	3110	1150 E	1240	776	664	533	373	537	816	23
24	3540	3690	3540	3360	1150 E	1330	785	668	441	344	654	1040 *	24
25	3370	3740	3790	3000	1100 E	1290	772	722	425	298	650	1220	25
26	3090	3740	3910	2840	1100 E	1260	785	726	409	351	589	1290	26
27	2790	3720	3980	2730	1150 E	1220	808	722	429	369	565	1390	27
28	2650	3740	3700	2600	1000 E	1160	821	944	489	358	581	1490	28
29	2520	3820	3460	2590	820 E	1120	776	740	481	320	589	1290	29
30	2550	3860	3360	2580	1100	1100	713	780	517	250	677	1300	30
31	2570		3300	2550		1070		740		236	790		31
MEAN	2677	3021	3533	2872	1697	929	764	703	650	383	440	900	MEAN
MAX.	3680	3860	3980	3360	2600	1330	1200	935	1080	557	790	1490	MAX.
MIN.	1400 E	2480	3150	2350	820 E	695	561	501	409	236	267	700	MIN.
AC. FT.	164600	179800	217200	176600	97630	57100	45470	43240	38680	23550	27060	53530	AC. FT.

E - ESTIMATED

NR - NO RECORD

* - DISCHARGE MEASUREMENT OR
OBSERVATION OF NO FLOW

- E AND *

MEAN
DISCHARGE
1547

MAXIMUM			
DISCHARGE	GAGE HT.	MO.	DAY
4020	15.58	12	27
			1400

MINIMUM			
DISCHARGE	GAGE HT.	MO.	DAY
213	8.86	7	31

TOTAL
ACRE FEET
1124000

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD			DATUM OF GAGE		
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B.B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD FROM TO	ZERO ON GAGE	REF. DATUM	
			C.F.S.	GAGE HT.	DATE						
37 40 34	121 15 51		79000	27.75	12-9-50	JUL 22-DEC 23 JAN 24-FEB 25 JUN 25-OCT 28 MAY 29-DATE		1931		8.4	USED
								1959		5.06	USCGS
										0.00	USCGS

Station located on left bank 30 ft. above the Durham Ferry Highway Bridge, 3 mi. below the Stanislaus River 3.4 mi. NE of Vernalis. Drainage area is approx. 14,010 sq. mi. Natural flow of stream affected by storage reservoirs, power development, ground water withdrawals and diversions for irrigation. Low flows consist mainly of return flow from irrigation. This station is operated under the Federal-State Cooperative Program. The records are furnished by the U.S.G.S.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	C01120	SOUTH FORK KINGS RIVER BELOW EMPIRE WEIR #2

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	110	0.0	0.0	18.0	19.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	1
2	99	0.0	0.0	21.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	2
3	100	0.0	0.0	21.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7	3
4	130	0.0	0.0	24.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7	4
5	114	0.0	0.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7	5
6	94	0.0	0.0	45.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.8	6
7	34	0.0	0.0	57.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.4	7
8	6.0	0.0	0.0	62.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.4	8
9	5.0	0.0	0.0	34.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.4	9
10	5.0	0.0	0.0	45.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.4	10
11	4.0	0.0	0.0	38.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.4	11
12	4.0	0.0	0.0	43.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.4	12
13	3.0	0.0	0.0	38.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.4	13
14	0.0	0.0	0.0	42.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.4	14
15	0.0	0.0	0.0	36.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.4	15
16	0.0	0.0	0.0	37.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.4	16
17	0.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	29.4	17
18	0.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	29.4	18
19	0.0	0.0	0.0	28.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	29.4	19
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	29.4	20
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	29.4	21
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	29.0	22
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	29.0	23
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	29.0	24
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	28.0	25
26	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	28.0	26
27	0.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	28.0	27
28	0.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	28.0	28
29	0.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	28.0	29
30	0.0	0.0	8.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	28.0	30
31	0.0	0.0	13	19.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	28.0	31
MEAN	22	0.0	0.0	26.0	2.0	0.0	0.0	0.0	0.0	0.0	5.0	26.0	MEAN
MAX.	130	0.0	13.0	62.0	19.0	0.0	0.0	0.0	0.0	0.0	10.4	29.4	MAX.
MIN.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	MIN.
AC. FT.	1404		42	1587	131						292	1543	AC. FT.

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 H — E AND *

MEAN
DISCHARGE
6.8

MAXIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

MINIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

TOTAL
ACRE FEET
4999

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
36 10	119 50	20S 19E									

Station located 1.0 mi. SW of Stratford. So. Fork Kings River, composed of Kings River water,
 is a tributary to the Tulare Lake area. Records furnished by Kings River Water Association.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	C02602	CROSS CREEK BELOW LAKE LAND CANAL #2

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1													1
2													2
3													3
4													4
5													5
6													6
7													7
8													8
9													9
10													10
11													11
12													12
13													13
14													14
15													15
16													16
17													17
18													18
19													19
20													20
21													21
22													22
23													23
24													24
25													25
26													26
27													27
28													28
29													29
30													30
31													31
MEAN MAX. MIN. AC. FT.													MEAN MAX. MIN. AC. FT.

E - ESTIMATED
 NR - NO RECORD
 * - DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # - E AND *

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE FEET
0.0						0.0		10	1	0000	

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE		
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO	
36 12 42	119 34 05	NE10 20S 22E				21-DATE				

Station located below Cross Creek Weir, 4 mi. E of Guernsey. Tributary to Tulare Lake area. At times the flow is a combination of water from Kaweah River, Kings River, and Cottonwood Creek. Records furnished by the Kaweah River Watermaster.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	C03130	ELK BAYOU NEAR TULARE ^a

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0.0	0.0*	0.0	0.0	0.0	0.0	0.0	0.0*	0.0	0.0	0.0	0.0	1
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0*	2
3	0.0	0.0	0.0	0.0*	0.0	0.0	0.0	0.0	0.0	0.0*	0.0*	0.0	3
4	0.0	0.0	0.0*	0.0	0.0	0.0*	0.0	0.0	0.0*	0.0	0.0	0.0	4
5	0.0	0.0	0.0	0.0	0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0*	0.0	0.0	0.0	0.0	0.0	8
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0*	0.0*	0.0	0.0*	17
18	0.0*	0.0	0.0*	0.0	0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18
19	0.0	0.0*	0.0	0.0	0.0	0.0	0.0	0.0*	0.0	0.0	0.0*	0.0	19
20	0.0	0.0	0.0	0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0*	0.0	0.0	0.0	0.0	0.0	22
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0*	0.0	0.0	23
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	MEAN
MAX.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	MAX.
MIN.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	MIN.
AC. FT.													AC. FT.

E - ESTIMATED
 NR - NO RECORD
 * - DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # - E AND *
 a - See note (a) below.

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE FEET
0.0						0.0		10	1	0000	

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
36 08 37	119 19 48	SW36 20S 24E	261	2.35	2- 5-63	OCT 58-DATE	MAR 57-SEP 58	1959		0.00	LOCAL

Station located 1.8 mi. W of U.S. Highway 99, 5.8 mi. S of Tulare. Prior to Mar. 4, 1960, station located 700 feet W of U.S. Highway 99, 4.5 mi. S of Tulare. Tributary to Tule River. Prior records, 1942 to July 1953, available at a site 1 mi. E of Elk Bayou Ave. 3.6 mi. below Old Highway 99 Bridge. Recorder installed March 6, 1957. Altitude of gage is approximately 250 ft. (from U.S.G.S. topographic map.)

(a) A partially opened gate in the control created a condition making it impossible to record low flows if such flow did occur.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	C03913	FRIANT-KERN CANAL DELIVERY TO PORTER SLOUGH

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0.0	10	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	1
2	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2
3	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3
4	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4
5	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5
6	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6
7	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7
8	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8
9	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9
10	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10
11	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11
12	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12
13	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13
14	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14
15	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15
16	0.0	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16
17	6.7	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17
18	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18
19	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19
20	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20
21	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21
22	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22
23	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23
24	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24
25	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25
26	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26
27	10	0.0	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	27
28	10	0.0	0.0	0.0	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	28
29	10	0.0	0.0	0.0	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	29
30	10	0.0	0.0	0.0	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	30
31	10	0.0	0.0	0.0	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	31
MEAN	4.7	5.4	0.0	0.0	0.0	1.5	0.1	0.0	0.0	0.0	0.0	0.0	MEAN
MAX.	10.0	10.0	0.0	0.0	0.0	10.0	3.3	0.0	0.0	0.0	0.0	0.0	MAX.
MIN.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	MIN.
AC. FT.	291	322				93	7						AC. FT.

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # — E AND *

MEAN
DISCHARGE
1.0

MAXIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

MINIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

TOTAL
ACRE FEET
712

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE		
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE
			C.F.S.	GAGE HT.	DATE			FROM	TO	
36 05 00	119 04 50	SW20 21S 27E								

These flows are deliveries from Friant-Kern Canal into Porter Slough under contract agreement with the U.S.B.R. Delivery is at the intersection of Porter Slough with the Friant-Kern Canal approx. 4 mi. W of Porterville. Records furn. by U.S.B.R.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	C03923	FRIANT-KERN CANAL DELIVERY TO TULE RIVER

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	169	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1
2	53	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31
MEAN	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	MEAN
MAX.	169	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	MAX.
MIN.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	MIN.
AC. FT.	440												AC. FT.

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # — E AND *

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE FEET
0.6											440

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
36 04 25	119 05 15	NW29 21S 27E									

These flows are deliveries from Friant-Kern Canal into Tule River under contract agreements with the U.S.B.R. Delivery is located on the Tule River approximately 4 mi. W of Porterville. Record furnished by U.S.B.R.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	C32100	NORTH FORK TULE RIVER AT SPRINGVILLE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0.7	1.9	17	9.8	18	5.8	185	47	27	1.4	0.2	0.4	1
2	0.3	2.3	16	8.8	17	20	168	46	26	1.3	0.2	0.4*	2
3	0.4	2.2	15	8.6	17	13	97	42	25	1.0	0.2*	0.4	3
4	0.5	2.0	14	8.6	17	12	77	40	22	1.0	0.3	0.4	4
5	0.5	2.5	13	8.6	16	11	72	43	21	1.1	0.4	0.4	5
6	0.5	9.2	12	8.8	15	11	67	64	19	1.3	0.4	0.3	6
7	1.1	15	12	8.8	15	14	58	56	20	0.8	0.6	0.4	7
8	0.7	10	11	8.6	14	14	53	51	23	0.7	0.4	0.4	8
9	0.7	9.7	16	8.5	13	13	57	55	30	0.6	0.3	0.6	9
10	0.7	10	15	8.6	12	13	68	58	28	0.6	0.2	0.4	10
11	0.9	9.1	12	8.7	12	12	76	65	26	0.6	0.3	0.2	11
12	0.5	7.6	13	8.0	12	18	77	70	21	0.7	0.4	0.1	12
13	0.9	6.5	12	8.0	12	26	83	76	18	0.6	0.4	0.1	13
14	0.9	5.9	12	7.9	11	19	88	74	15	0.7	0.4	0.1	14
15	0.9	36	12	7.7	10	19	93	73	13	2.1	0.1	0.0	15
16	1.3	46	12	7.6	10	20	91	70	13	0.3	0.1	0.0	16
17	2.1	25	12	7.6	9.9	20	84	65	12	0.3	0.1	0.1	17
18	1.4	19	12	8.1	9.3*	24	73	62	12	0.4	0.0	0.5	18
19	1.2	15	12	9.2	9.3	28	75	58	9.5	0.7	0.1	0.5	19
20	1.9	40	11	8.6	7.6	28	64	57	8.2	1.2	0.2	0.5	20
21	2.4	58	11	15	6.6	28	57	56	7.7	0.4	0.2	0.4	21
22	2.7	31	11	29	6.6	37	53	52	6.9	0.3	0.2	0.3	22
23	2.7	26	10	21	6.8	55	51	47	5.6	0.5	0.1	0.3	23
24	3.1	30	10	17	7.0	57	48	44	6.0	0.6	0.1	0.2	24
25	3.2	30	9.6	16	6.6	47	44	42	4.3	0.7	0.1	0.2	25
26	3.1	25	9.4	16	5.6	50	41	48	2.3	0.4	0.2	0.2	26
27	2.6	23	9.4	15	4.8	50	40	45	2.7	0.9	0.3	0.4	27
28	2.4	21	9.0	15	3.6	68	43	41	2.8	1.0	0.4	0.4	28
29	2.5	21	9.0	14	5.1	80	47	37	2.1	0.3	0.4	0.2	29
30	2.0	19	8.7	15		85	46	33	1.8	0.3	0.2	0.2	30
31	1.5		8.5	16	*	92		30		0.3	0.4		31
MEAN	1.5	18.6	11.8	11.6	10.7	31.9	72.5	53.1	14.4	0.7	0.3	0.3	MEAN
MAX.	3.2	58.0	17.0	29.0	18.0	92.0	185	76.0	30.0	2.1	0.6	0.6	MAX.
MIN.	0.3	1.9	8.5	7.6	3.6	5.8	40.0	30.0	1.8	0.3	0.0	0.0	MIN.
AC. FT.	92	1109	727	710	614	1963	4316	3267	855	46	16	18	AC. FT.

E - ESTIMATED

NR - NO RECORD

* - DISCHARGE MEASUREMENT OR
OBSERVATION OF NO FLOW

- E AND *

MEAN
DISCHARGE
18.9

MAXIMUM
DISCHARGE
313
GAGE HT.
6.62
MO.
4
DAY
1
TIME
2200

MINIMUM
DISCHARGE
0.0
GAGE HT.
MO.
8
DAY
16
TIME
1710

TOTAL
ACRE FEET
13730

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE		
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B.B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE
			C.F.S.	GAGE HT.	DATE			FROM	TO	
36 08 23	118 48 16	SE35 20S 29E	4600E	10.29	1-31-63	FEB 57-DATE		1957		0.00

Station located at State Highway 190 Bridge, 0.8 mi. NE of Springville. Drainage area is 97.9 sq. mi.
Altitude of gage is approx. 990 ft. (from U.S.G.S. topographic map.)

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	C03169	TULE RIVER BELOW PORTERVILLE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	152	0.0*	0.0	0.0	0.0	0.0E	45	0.0*	0.0	0.0	0.0	0.0	1
2	52	199	0.0	0.0	0.0	0.0E	37	0.0	0.0	0.0	0.0	0.0	2
3	0.0	267	0.0	0.0*	0.0	0.0E	36	0.0	0.0	0.0*	0.0	0.0	3
4	0.0	263 *	0.0*	0.0	0.0	0.0*	32	0.0	0.0*	0.0	0.0	0.0	4
5	0.0	202	0.0	0.0	0.0*	0.0	33	0.0	0.0	0.0	0.0	0.0	5
6	0.0	202	0.0	0.0	0.0	0.0	31	0.0	0.0	0.0	0.0	0.0	6
7	0.0	163	0.0	0.0	0.0	0.0	39	0.0	0.0	0.0	0.0	0.0	7
8	0.0*	84	0.0	0.0	0.0	0.0	41 *	0.0	0.0	0.0	0.0	0.0	8
9	0.0	50	2.9	0.0	0.0	0.0	36	0.0	0.0	0.0	0.0	0.0	9
10	0.0	39	11	0.0	0.0	0.0	33	0.0	0.0	0.0	0.0	0.0	10
11	0.0	36	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	11
12	0.0	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12
13	0.0	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13
14	0.0	21	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14
15	0.0	18	5.4	0.0	0.0	0.0	0.0	0.0*	0.0	0.0	0.0	0.0	15
16	0.0	67	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16
17	0.0	65	2.1	0.0	0.0	0.0	0.0	0.0	0.0*	0.0	0.0	0.0	17
18	0.0*	3.1	9.2*	0.0	0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18
19	0.0	31 *	0.0	0.0	0.0E	0.0*	0.0	0.0	0.0	0.0	0.0	0.0	19
20	0.0	28	0.0	0.0*	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20
21	0.0	71	0.0	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21
22	0.0	86	0.0	0.0	0.0E	0.0	0.0*	0.0	0.0	0.0	0.0	0.0	22
23	0.0	29	0.0	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23
24	0.0	28	0.0	0.0	0.0E	2.8*	0.0	0.0	0.0	0.0	0.0	0.0	24
25	0.0	26	0.0	0.0	0.0E	18	0.0	0.0	0.0	0.0	0.0	0.0	25
26	0.0	26	0.0	0.0	0.0E	30	0.0	0.0	0.0	0.0	0.0	0.0	26
27	0.0	19	0.0	0.0	0.0E	34	0.0	0.0	0.0	0.0	0.0	0.0	27
28	0.0	8.2	0.0	0.0	0.0E	36	0.0	0.0	0.0	0.0	0.0	0.0	28
29	0.0	1.2	0.0	0.0	0.0E	38	0.0	0.0	0.0	0.0	0.0	0.0	29
30	0.0	0.0	0.0	0.0	0.0	42	0.0	0.0	0.0	0.0	0.0	0.0	30
31	0.0	0.0	0.0	0.0	0.0	45	0.0	0.0	0.0	0.0	0.0	0.0	31
MEAN	6.6	69.3	1.1	0.0	0.0	7.9	12.1	0.0	0.0	0.0	0.0	0.0	MEAN
MAX.	152	267	11.0	0.0	0.0	45.0	45.0	0.0	0.0	0.0	0.0	0.0	MAX.
MIN.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	MIN.
AC. FT.	405	4121	70			488	720						AC. FT.

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # — E AND *

MEAN	MAXIMUM	MINIMUM	TOTAL
DISCHARGE	DISCHARGE GAGE HT. MO. DAY TIME	DISCHARGE GAGE HT. MO. DAY TIME	ACRE FEET
8.1			5804

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
36 04 40	119 06 22	NW30 21S 27E	5170	8.17	5-19-57	FEB 57-DATE		1957	1959	0.00	LOCAL
								1959		-3.48	LOCAL

Station located 330 ft. above Rockford Road Bridge, 5.1 mi. W of Porterville. Flows regulated by Success Reservoir and spill from Friant-Kern Canal. Altitude of gage is approx. 400 ft. (from U.S.G.S. topographic map). Flows include C.V.P. releases from Friant-Kern Canal to Tule River. Records for July, August, and September furnished by the Tule River Association and reviewed by the Department of Water Resources.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE
 (IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	C03970	CAMPBELL MORELAND DITCH ABOVE PORTERVILLE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	20	6.1	0.0	9.6	12	0.0	0.0*	9.4	29 *	7.8	15	24	1
2	20	6.1	0.0*	9.7*	7.8	0.5*	0.0	10	29	7.8	15	24	2
3	20	6.7	0.0	9.6	6.0	0.0	0.0	10	28	7.8	15	23	3
4	20	7.0	0.0	9.6	2.1*	0.0	0.0	9.8	15	8.7	14	22	4
5	20	7.2	0.0	9.6	1.5	0.1	0.0	9.7	7.7	9.6	14 *	25	5
6	20	7.4	0.0	9.6	1.1	0.3	0.0	10	8.4	9.6	14	30	6
7	19	7.2	0.0	9.6	0.9	0.5	0.0	19 *	9.0	9.6	14	30	7
8	16	6.5	0.0	9.6	0.8	0.2	0.0	25	9.9	9.6	14	32	8
9	14	6.1	0.0	9.6	0.7	0.2	0.0	24	8.7	9.6*	14	34	9
10	15	5.6	0.0	9.6	0.3	0.1	0.0	24	8.3	9.6	14	34	10
11	16	5.3	0.0	9.3	0.0	2.5	0.0	23	7.7	9.3	14	33	11
12	16	4.9	0.0	9.3	0.0	5.7	0.0	23	8.4	9.6	18	32	12
13	15	2.7	0.0	9.3	0.0	0.0	0.0	25	7.8	9.3	21 *	33	13
14	15	0.0	0.0	15	0.1	0.0	0.0	27	7.6	9.6	18	23	14
15	15 E	0.0*	0.0	19	0.3	0.0	0.0	28 *	7.0	13	15	16	15
16	15 E	0.0	0.0	20	0.4	0.0	0.0*	28	6.7*	14	13	17	16
17	15 E	0.0	0.0*	19 *	0.4	0.0*	0.0	28	8.0	13	10	16	17
18	15 #	0.0	0.0	19	0.4*	0.0	0.0	28	10	13	7.2*	16	18
19	15	0.0	0.0	20	0.3	0.0	0.0	28	9.7	13	6.7	16	19
20	15	0.0	0.0	20	0.3	0.0	0.0	29	9.3	13	6.7	21	20
21	13	0.0	1.9	21	0.2	0.0	0.0	30	9.6	12 *	6.7	23	21
22	6.8	0.0	6.2	22	0.2	0.0	0.0	30	9.7	13	6.2	21	22
23	6.4	0.0	8.6	22	0.0	0.0	0.0	31	9.7	13	6.7	22	23
24	6.8	0.0	8.7	20	0.0	0.0	0.0	31	16	13	8.1	21	24
25	7.4	0.0	8.7	19	0.0	0.0	0.0	30	19	12	7.4*	20	25
26	7.8	0.0	8.7	19	0.1	0.0	0.0	29	17	12	16	21	26
27	8.6	0.0	9.0	19	0.0	0.0	0.0	31	16	13	22	22	27
28	7.8	0.0	9.0	20	0.0	0.0	7.3*	31	15	13	24	21	28
29	6.3	0.0	9.0	20	0.0	0.0	11	30	15	14	26	21	29
30	6.1	0.0	9.3	19	0.0	0.0	9.6*	29	11	15	26	19	30
31	6.3*	0.0	9.6	19	0.0	0.0	0.0	29		15	26		31
MEAN	13.5	2.6	2.9	15.4	1.2	0.3	0.9	24.2	12.4	11.3	14.5	23.7	MEAN
MAX.	20.0	7.4	9.6	22.0	12.0	5.7	11.0	31.0	29.0	15.0	26.0	34.0	MAX.
MIN.	6.1	0.0	0.0	9.3	0.0	0.0	0.0	9.4	6.7	7.8	6.2	16.0	MIN.
AC. FT.	832	156	176	944	71	20	55	1485	740	697	888	1412	AC. FT.

E — ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # — E AND *

MEAN
DISCHARGE
10.2

MAXIMUM
DISCHARGE GAGE HT. MO. DAY TIME

MINIMUM
DISCHARGE GAGE HT. MO. DAY TIME

TOTAL
ACRE FEET
7476

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
36 02 48	118 56 54	NW 4 22S 28E				AUG 42-DATE		Oct 62	Oct 62	0.00 -2.00	LOCAL LOCAL

Station located 3.9 mi. SE of Porterville approximately 2600 ft. below head. This is regulated diversion from Tule River. This station is operated under cooperative agreement between the Department of Water Resources and the Tule River Association. Records for July, August, and September furnished by the Tule River Association and reviewed by the Department of Water Resources.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	C03182	PORTER SLOUGH AT PORTERVILLE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	40 *	6.6	20	0.0E	0.0	0.0	0.0*	0.0*	36	31	17	0.0	1
2	40	49	20	0.0#	0.0	0.0*	0.0	0.0	42	26	1.2	0.0	2
3	39	57	20	0.0	0.0	0.0	0.0	0.0	33	27 *	0.2	0.0	3
4	38	60	18 *	0.0	0.0	0.0*	0.0	0.0	30 *	26	0.0	0.0	4
5	39	72	11	0.0	0.0	0.0	0.0	0.0	32	24 *	0.0	0.0	5
6	40	64	2.5	0.0	0.0	0.0	0.0	0.0	16	23	11	0.0	6
7	38	56	0.8	0.0	0.0	0.0	0.0	0.0	0.0	23	35	0.0	7
8	24	44	0.5	0.0	0.0	0.0	0.0*	0.0	0.0	23	30	0.0	8
9	2.3	3.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	23	22	0.0	9
10	0.3	1.1	5.4	0.0	0.0	0.0	0.0	0.0	0.0	22	22	0.0	10
11	0.1	0.4	27	0.0	0.0	0.0	0.0	0.0	0.0	12	22	0.0	11
12	0.0	0.1	28	0.0	0.0	0.0	0.0	0.0	0.0	0.7	23	0.0	12
13	0.0	0.0	20	0.0	0.0	0.0	0.0	0.0	17	0.0	23 *	0.0	13
14	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	41	17	24	0.0	14
15	0.0	3.3	0.6	0.0	0.0	0.0	0.0	0.0*	38	31	13	0.0	15
16	0.0	77	0.3	0.0	0.0	0.0	0.0	0.0	30	20	0.6	0.0	16
17	0.0	76	0.0	0.0	0.0	0.0	0.0	0.0	30 *	8.8*	0.0	0.0	17
18	0.0*	43	1.3	0.0	0.0*	0.0	0.0	0.0	27	0.4	0.0	0.0	18
19	0.0	4.2*	19	0.0	0.0	0.0	0.0	0.0	24	0.0	0.0	0.0	19
20	0.0	1.6	13	0.0*	0.0	0.0	0.0	0.0	24	0.0	0.0	0.0	20
21	0.0	14	1.6	0.0	0.0	0.0	0.0	0.0	24	0.0	0.0	0.0	21
22	0.0	59	0.3	0.0	0.0	0.0	0.0*	0.0	25	6.7	0.0	0.0	22
23	0.0	35	0.0	0.0	0.0	0.0	0.0	0.0	24	27	0.0	0.0	23
24	0.0	28	0.0	0.0	0.0	0.0	0.0	0.0	23	30 *	0.0	0.0	24
25	0.0	27	0.0	0.0	0.0	0.0	0.0	0.0	12	28	0.0	0.0	25
26	0.0	26	0.0	0.0	0.0	0.0	0.0	0.0	0.4	25	0.0	0.0	26
27	0.0	25	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	23	0.0	0.0	27
28	0.0	23	0.0E	0.0	0.0	0.0	0.0	3.5	0.0	24	0.0	0.0	28
29	0.0	23	0.0E	0.0	0.0	0.0	0.0	18	8.5	25	0.0	0.0	29
30	0.0	20	0.0E	0.0	0.0	0.0	0.0	25	33	25	0.0	0.0	30
31	0.0*		0.0E	0.0	0.0	0.0	0.0	27		25	0.0	0.0	31
MEAN	9.7	30.0	6.8	0.0	0.0	0.0	0.0	2.4	19.0	18.6	7.9	0.0	MEAN
MAX.	40.0	77.0	28.0	0.0	0.0	0.0	0.0	27.0	42.0	31.0	35.0	0.0	MAX.
MIN.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	MIN.
AC. FT.	596	1783	420					146	1130	1144	484		AC. FT.

E - ESTIMATED
 NR - NO RECORD
 * - DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 H - E AND *

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE FEET
7.9											5703

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M. O. B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
36 03 29	118 59 08	SE31 21S 28E				JAN 42-DATE		1957		0.00	LOCAL

Station located at "B" Lane Bridge, immediately E of Porterville. This is regulated diversion from Tule River. Altitude of gage is approx. 465 ft. (from U.S.G.S. topographic map). Records for July, August, and September furnished by the Tule River Association and reviewed by the Department of Water Resources.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE
 (IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	C03984	PORTER SLOUGH DITCH AT PORTERVILLE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	11	0.0*	0.0	0.0	0.0	0.0	0.0*	0.0*	4.1*	13 *	15	0.0	1
2	12	5.1	0.0*	0.0*	0.0	0.0*	0.0	0.0	11 *	11	0.2	0.0	2
3	12	12	0.0	0.0	0.0	0.0	0.0	0.0	12	12 *	0.0	0.0	3
4	12	13	0.0	0.0	0.0	0.0	0.0	0.0	12 *	12	0.0	0.0	4
5	12	15	0.0	0.0	0.0*	0.0	0.0	0.0	12 *	11 *	0.0	0.0	5
6	12	14	0.0	0.0	0.0	0.0	0.0	0.0	6.4	11 *	0.2	0.0	6
7	7.2	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12	14 *	0.0	7
8	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12	15 *	0.0	8
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12 *	15 *	0.0	9
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12	15	0.0	10
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	15	0.0	11
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15	0.0	12
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15 *	0.0	13
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	1.6	17	0.0	14
15	0.0	0.0*	0.0	0.0	0.0	0.0	0.0	0.0*	11	9.0*	11	0.0	15
16	0.0	0.1	0.0	0.0	0.0	0.0	0.0*	0.0	12 *	8.5	0.0	0.0	16
17	0.0	9.0	0.0*	0.0*	0.0	0.0*	0.0	0.0	13	4.7*	0.0	0.0	17
18	0.0	7.1	0.0	0.0	0.0*	0.0	0.0	0.0	13	0.0	0.0	0.0	18
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14 *	0.0	0.0	0.0	19
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14	0.0	0.0	0.0	20
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14	0.0	0.0	0.0	21
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15 *	0.0	0.0	0.0	22
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14	6.4	0.0	0.0	23
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13	13 *	0.0	0.0	24
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	14	0.0	0.0	25
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14	0.0	0.0	26
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13	0.0	0.0	27
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14	0.0	0.0	28
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16 *	0.0	0.0	29
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10	16	0.0	0.0	30
31	0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	417	13	0.0	0.0	31
MEAN	2.5	3.2	0.0	0.0	0.0	0.0	0.0	0.0	7.0	8.6	4.8	0.0	MEAN
MAX.	12.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	16.0	17.0	0.0	MAX.
MIN.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	MIN.
AC. FT.	155	191							417	531	292		AC. FT.

E - ESTIMATED
 NR - NO RECORD
 * - DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # - E AND *

MEAN
DISCHARGE
2.2

MAXIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

MINIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

TOTAL
ACRE FEET
1586

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE		
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO	
36 04 06	119 01 06	SE26 21S 27E				JAN 43-DATE		1943		0.00 LOCAL

Station located in Porterville 0.5 mi. W of Porterville Post Office, approximately 150 ft. below head. This is regulated diversion from Tule River via Porter Slough. This station is operated under cooperative agreement between the Department of Water Resources and the Tule River Association. Records for July, August, and September furnished by the Tule River Association and reviewed by the Department of Water Resources.

TABLE B-4 (Cont.)

WATER YEAR	STATION NO.	STATION NAME
1964	C03187	PORTER SLOUGH NEAR PORTERVILLE

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	1.0	0.0*	7.8	0.0	0.0	0.0	0.1	0.0*	0.0	0.0	0.0	0.0	1
2	2.4	0.1	7.6	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	2
3	2.8	9.3	7.6	0.0*	0.0	0.0	0.0	0.0	0.0	0.0*	0.0	0.0	3
4	3.7	13	6.9*	0.0	0.0	0.0*	0.0	0.0	0.0*	0.0	0.0	0.0	4
5	4.0	25	3.0	0.0	0.0*	0.0	0.0	0.1	0.0	0.0	0.0	0.0	5
6	5.2	26	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	6
7	7.8*	18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7
8	10	27	0.0	0.0	0.0	0.0	0.0*	0.0	0.0	0.0	0.0	0.0	8
9	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10
11	0.1	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11
12	0.0	0.0	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12
13	0.0	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	14
15	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0*	2.4	0.1	0.0	0.0	15
16	0.4	47 E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16
17	0.0	66 E	0.0	0.0	0.0	0.0	0.0	0.0	0.0*	0.0	0.0	0.0	17
18	0.0*	26	0.0*	0.0	0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18
19	0.0	0.6	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19
20	0.0	0.6	5.3	0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20
21	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21
22	0.0	41	0.0	0.0	0.0	0.0	0.0*	0.0	0.0	0.0	0.0	0.0	22
23	0.0	21	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	23
24	0.0	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24
25	0.0	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25
26	0.0	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26
27	0.0	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27
28	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28
29	0.0	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29
30	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30
31	0.0*		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31
MEAN	1.2	13.2	2.3	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	MEAN
MAX.	10.0	66.0E	12.0	0.2	0.0	0.2	0.1	0.1	2.4	0.1	0.0	0.0	MAX.
MIN.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	MIN.
AC. FT.	74	787	139			1			5				AC. FT.

E - ESTIMATED
 NR - NO RECORD
 * - DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # - E AND *

MEAN
DISCHARGE
1.4

MAXIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

MINIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

TOTAL
ACRE FEET
1006

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.S.B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
36 04 00	119 03 08	NE28 21S 27E	364	5.14	4- 3-58	JAN 57-DATE		1957		0.00	LOCAL

Station located at Newcomb Drive Bridge, 2.0 mi. W of Porterville. Tributary to Tulare Lake Basin via Tule River. Altitude of gage is approx. 425 ft. (from U.S.G.S. topographic map). Records for July, August, and September furnished by the Tule River Association and reviewed by the Department of Water Resources.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	C03965	VANDALIA DITCH NEAR PORTERVILLE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	4.0	0.0*	0.0	0.0	0.0	0.0	0.0*	0.0*	3.6*	0.0*	3.9	3.1	1
2	4.0	0.0	0.0*	0.0*	0.0	0.0*	0.0	0.0	3.5	0.0	3.8	2.9	2
3	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	3.8	2.9	3
4	4.3	0.0	0.0	0.0	0.0*	0.0	0.0	0.0	3.3	0.0	3.8	2.9	4
5	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	3.7*	2.8	5
6	4.1	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.6	0.0	3.7	2.8	6
7	3.9	0.0	0.0	0.0	0.0	0.0	0.0	4.1*	3.9	0.0	3.7	2.9	7
8	3.6	0.0	0.0	0.0	0.0	0.0	0.0	4.3	4.2	0.0	3.8	15	8
9	4.1	0.0	0.0	0.0	0.0	0.0	0.0	4.1	4.5	0.0	3.8	0.5	9
10	4.2	0.0	0.0	0.0	0.0	0.0	0.0	4.1	4.4	0.0	3.8	0.0	10
11	4.2	0.0	0.0	0.0	0.0	0.0	0.0	4.0	4.4	0.0	3.8	0.0	11
12	4.2	0.0	0.0	0.0	0.0	0.0	0.0	4.0	4.4	0.0	3.8	0.0	12
13	4.2	0.0	0.0	0.0	0.0	0.0	0.0	4.1	3.9	0.0	3.8*	0.0	13
14	4.4	0.0	0.0	0.0	0.0	0.0	0.0	4.1	3.6	0.0	3.3	0.0	14
15	4.4	0.0*	0.0	0.0	0.0	0.0	0.0	4.1*	3.6	2.4	3.2	0.0	15
16	4.5	0.0	0.0	0.0	0.0	0.0	0.0*	4.1	3.6*	4.1	3.2	0.0	16
17	4.2	0.0	0.0*	0.0*	0.0	0.0*	0.0	4.1	3.7	4.1	3.1	0.0	17
18	3.7*	0.0	0.0	0.0	0.0*	0.0	0.0	4.0	4.0	4.1	3.0*	0.0	18
19	3.5	0.0	0.0	0.0	0.0	0.0	0.0	4.0	2.0	4.2	3.0	0.0	19
20	3.4	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.4	4.2	3.0	0.0	20
21	2.1	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.3	4.1*	3.0	0.0	21
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.2	4.1	3.1	0.0	22
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.2	4.1	3.2	0.0	23
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.1	4.1	3.2	0.0	24
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	4.1	3.2*	0.0	25
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	4.1	3.1	0.0	26
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	4.1	3.2	0.0	27
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	3.4	3.3	0.0	28
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	3.1	3.4	0.0	29
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	4.1	3.4	0.0	30
31	0.0*	0.0	0.0	0.0	0.0	0.0	0.0	3.7		4.1	3.4		31
MEAN	2.7	0.0	0.0	0.0	0.0	0.0	0.0	3.4	2.4	2.1	3.4	0.7	MEAN
MAX.	4.5	0.0	0.0	0.0	0.0	0.0	0.0	4.3	4.5	4.2	3.9	3.1	MAX.
MIN.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	MIN.
AC. FT.	165							209	143	132	211	44	AC. FT.

E - ESTIMATED
 NR - NO RECORD
 * - DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # - E AND *

MEAN DISCHARGE
1.2

MAXIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

MINIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

TOTAL ACRE FEET
904

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
36 03 00	118 58 18	NE 5 22S 28E				1948-DATE		1948		0.00	LOCAL

Station located 2.8 mi. SE of Porterville approximately 1000 ft. below head. This is regulated diversion from Tule River. This station is operated under cooperative agreement between the Department of Water Resources and the Tule River Association. Records for July, August, and September furnished by the Tule River Association and reviewed by the Department of Water Resources.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	C03960	POPLAR OITCH NEAR PORTERVILLE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	12	3.2	37	0.3	30	3.4	0.0*	0.0*	0.0*	0.0	89 *	18	1
2	12	47	38 *	0.5*	9.9	3.8*	0.0	0.0	0.0	0.0	87	18	2
3	13	60	38	0.5	8.1	2.8	0.0	0.0	0.0	0.0	86	16	3
4	13	59 *	37	0.5	7.3*	0.8	0.0	0.0	0.0	8.9	85	8.9	4
5	6.1	57	38	0.4	6.9	0.0	0.0	0.0	0.0	46 *	84 *	0.0	5
6	0.2	13	30	0.3	6.3	0.0	0.0	0.0	19	88	85	0.0	6
7	0.1	0.2	27	0.1	6.0	0.0	0.0	0.0	61	114	85	0.0	7
8	0.1	0.0	27	0.1	5.8	0.0	0.0	0.0	87 *	122	86	0.0	8
9	0.2	0.0	27	0.0	5.6	0.0	0.0	0.0	98 *	122 *	86	0.0	9
10	0.2	0.0	27	0.0	5.4	0.0	0.0	0.0	103	121	85	0.0	10
11	0.2	0.0	26	0.0	5.4	0.0	0.0	0.0	104	119	85	0.0	11
12	0.2	0.0	26	0.0	5.4	0.0	0.0	0.0	104	119 *	86	0.0	12
13	0.2	0.0	26	0.0	5.2*	0.0	0.0	0.0	62	116 *	87 *	0.0	13
14	0.2	4.8	26	0.0	4.9	0.0	0.0	0.0	0.7	110	41	0.0	14
15	0.2	9.8*	26	0.0	4.7	0.0	0.0	0.0*	0.0	111	1.4	0.0	15
16	0.2	13	17	19	4.5	0.0	0.0*	0.0	0.0*	113	3.2	0.0	16
17	0.2	14	0.5*	29 *	4.2	0.0*	0.0	0.0	18	112	0.7	0.0	17
18	0.2	19	0.4	30	4.1*	0.0	0.0	0.0	59	110	0.0	0.0	18
19	0.3	35	0.3	30	4.0	0.0	0.0	4.8*	86	112	0.0	0.0	19
20	0.3	38	0.2	34	3.9	0.0	0.0	17	105	113	0.0	0.0	20
21	0.2	34	0.1	34	3.7	0.0	0.0	20 *	106	112 *	0.0	0.0	21
22	0.3	35	0.1	40	3.7	0.0	0.0	20	107	112	0.0	0.0	22
23	0.2	34	0.1	48	3.7	0.0	0.0	20	112	112	0.0	0.0	23
24	0.2	37	0.1	52 *	3.7	0.0	0.0	19	114	112	0.0	0.0	24
25	0.3	37	0.0	50	3.6	0.0	0.0	20	115	112	0.0	0.0	25
26	0.2	37	0.1	50	3.6	0.0	0.0	19	70	112	0.0	0.0	26
27	0.2	37	0.1	49 *	3.5	0.0	0.0	18	0.0	113	0.0	0.0	27
28	0.2	38	0.1	44 *	3.5	0.0	0.0	17	0.0	110	5.7	0.0	28
29	0.3	37	0.1	40	3.5	0.0	0.0	9.3*	0.0	98	20	0.0	29
30	0.3	37	0.1	40	0.0	0.0	0.0	0.0	0.0	91	17	0.0	30
31	0.3	0.1	0.1	40	0.0	0.0	0.0	0.0	0.0	91	16	0.0	31
MEAN	2.0	24.5	15.3	20.4	5.9	0.3	0.0	5.9	51.3	94.6	39.4	2.0	MEAN
MAX.	13.0	60.0	38.0	52.0	30.0	3.8	0.0	20.0	115.0	122.0	89.0	18.0	MAX.
MIN.	0.1	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	MIN.
AC. FT.	123	1460	943	1253	337	21		365	3050	5815	2422	121	AC. FT.

E - ESTIMATED
 NR - NO RECORD
 * - DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # - E AND *

MEAN
DISCHARGE
21.8

MAXIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

MINIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

TOTAL
ACRE FEET
15910

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE		
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE
			C.F.S.	GAGE HT.	DATE			FROM	TO	
36 03 18	119 00 54	SW36 21S 27E				APR 42-DATE		1942		0.00
										LOCAL

Station located 1.0 mi. S of Porterville approximately 4750 ft. below head. This is regulated diversion from Tule River. This station is operated under cooperative agreement between the Department of Water Resources and the Tule River Association. Records for July, August, and September furnished by the Tule River Association and reviewed by the Department of Water Resources.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	C03925	HUBBS - MINER DITCH AT PORTERVILLE ^a

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	17	0.0*	0.0E	0.0	0.0	0.0	0.0*	0.0*	0.0*	7.8*	6.4	0.0	1
2	17	8.8	0.0#	0.0*	0.0	0.0*	0.0	0.0	0.0	7.3	0.0	0.0	2
3	17	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0	0.0	3
4	14	13	0.0	0.0	0.0*	0.0	0.0	0.0	0.0	6.9	0.0	0.0	4
5	9.6	12	0.0	0.0	0.0	0.0	0.0	3.4	0.0	8.0	0.0	0.0	5
6	7.5	12	0.0	0.0	0.0	0.0	0.0	7.6	1.8	7.9	6.7	0.0	6
7	4.1	9.3	0.0	0.0	0.0	0.0	0.0	8.0*	5.9	10	11 *	0.0	7
8	0.0	4.8	0.0	0.0	0.0	0.0	0.0	4.7	9.3*	16	9.4	0.0	8
9	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	13	14	6.8*	8.0	9
10	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	13	11	5.9	11	10
11	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	12	6.4	5.6	6.5	11
12	0.0	0.1	0.0	0.0	0.0	1.4	0.0	2.4	12	8.1*	5.9	3.8*	12
13	0.0	0.0	0.0	0.0	0.0	8.3	0.1	6.8*	9.6	9.5*	8.0*	0.0	13
14	0.0	0.0	0.0	0.0	0.0	12	6.5	7.6	6.5	14	11	0.0	14
15	0.0	0.0#	0.0	0.0	0.0	13	11	7.2*	7.3	16 *	13	0.0	15
16	0.0	0.0E	0.0	0.0	0.0	14	11 *	6.9	3.6*	17	12	0.0	16
17	0.0	0.0E	0.0*	0.0*	0.0	17 *	9.7*	6.8	0.0E	15	6.7	0.0	17
18	0.0	0.0E	0.0*	0.0	0.0*	17	6.9	3.2	0.0E	7.8	5.2*	0.0	18
19	0.0	0.0E	0.0	0.0	0.0	8.5*	5.0	0.0*	0.0E	8.1	5.0	0.0	19
20	0.0	0.0E	0.0	0.0*	0.0	0.0	3.2	2.4	0.0E	10	5.0	0.0	20
21	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	6.6	1.9E	12 *	4.7	2.8	21
22	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	6.3	6.1#	12	4.8	11 *	22
23	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	6.6	7.6	11	5.2	13	23
24	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	6.8	14 *	11	5.1	12	24
25	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	7.3	15 *	13	5.1	10 *	25
26	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	6.9	14	15	5.1	2.5	26
27	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	7.6*	19 *	17	5.5	0.0	27
28	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	4.0	19	18	8.1	0.0	28
29	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	13	18 *	16	0.0	29
30	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	7.5	19	20	0.0	30
31	0.0*		0.0	0.0	0.0	0.0		0.0		13	12		31
MEAN	2.8	2.6E	0.0E	0.0	0.0	2.9	1.8	3.8	7.0	11.8	6.9	2.7	MEAN
MAX.	17.0	14.0E	0.0E	0.0	0.0	17.0	11.0	8.0	19.0	19.0	20.0	13.0	MAX.
MIN.	0.0	0.0E	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	6.4	0.0	0.0	MIN.
AC. FT.	171	153				181	106	236	419	728	427	160	AC. FT.

E - ESTIMATED

NR - NO RECORD

* - DISCHARGE MEASUREMENT OR
OBSERVATION OF NO FLOW

- E AND *

a - See note (a) below.

MEAN
DISCHARGE
3.3

MAXIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

MINIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME
0.0		10	7	1600

TOTAL
ACRE FEET
2581

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
36 03 27	119 02 02	NW35 21S 27E				DEC 42-DATE		1942		0.00	LOCAL

Station located 1.1 mi. SW of Porterville, approximately 3400 ft. below head. This is regulated diversion from Tule River. This station is operated under cooperative agreement between the Department of Water Resources and the Tule River Association. Records for July, August, and September furnished by the Tule River Association and reviewed by the Department of Water Resources.

(a) During extended periods of estimated no flow the recorder at this station was deactivated. The recorder was activated prior to anticipated diversions upon notification from the Tule River Association.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE
 (IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	C03940	RHODES - FINE DITCH NEAR PORTERVILLE ^a

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0.0E	0.0	0.0E	0.0E	0.0E	0.0E	0.0*	12	15 *	0.0*	0.0	0.0	1
2	0.0E	0.0	0.0E	0.0E	0.0E	0.0E	0.0	12	16 *	0.0	0.0	0.0	2
3	0.0E	0.0	0.0E	0.0E	0.0E	0.0E	0.0	3.6	12	0.0	0.0	0.0	3
4	0.0E	0.0	0.0E	0.0E	0.0E	0.0	0.0	8.1	6.1*	0.0	0.0	0.0	4
5	0.0E	0.0	0.0E	0.0E	0.0E	0.0	0.0	13 *	6.1*	0.0	0.0	0.0	5
6	0.0E	0.0	0.0E	0.0E	0.0E	0.0	0.0	16	8.8	0.0	0.0	0.0	6
7	0.0E	0.0	0.0E	0.0E	0.0E	0.0	0.0	15	5.7	0.0	0.0	0.0	7
8	0.0E	0.0	0.0E	0.0E	0.0E	0.0	0.0	19	9.4	0.0	0.0	0.0	8
9	0.0E	0.0	0.0E	0.0E	0.0E	0.0	0.0	18	13	0.0	0.0	0.0	9
10	0.0E	0.0	0.0E	0.0E	0.0E	0.0	0.0	15	12	0.0	0.0	0.0	10
11	0.0E	0.0	0.0E	0.0E	0.0E	0.0	0.0	14	12	0.0	0.0	0.0	11
12	0.0E	0.0	0.0E	0.0E	0.0E	0.0	0.0	11	10	0.0	0.0	0.0	12
13	0.0E	0.0	0.0E	0.0E	0.0E	0.0	0.0	11	8.8	0.0	0.0	0.0	13
14	0.0E	0.0	0.0E	0.0E	0.0E	0.0	0.0	15	7.6	0.0	0.0	0.0	14
15	0.0E	0.0E	0.0E	0.0E	0.0E	0.0	0.0	17 *	12	0.0	0.0	0.0	15
16	0.0E	0.0E	0.0E	0.0E	0.0E	0.0	0.0*	17	9.1*	0.0	0.0	0.0	16
17	0.0E	0.0E	0.0E	0.0E	0.0E	0.0	0.0	19	5.0	0.0	0.0	0.0	17
18	0.0E	0.0E	0.0E	0.0E	0.0E	0.0	0.0	20	3.6	0.0	0.0	0.0	18
19	0.0E	0.0E	0.0E	0.0E	0.0E	0.0	0.0	19 *	6.8*	0.0	0.0	0.0	19
20	0.0E	0.0E	0.0E	0.0E	0.0E	0.0	0.0	16	4.4	0.0	0.5	0.0	20
21	0.0E	0.0E	0.0E	0.0E	0.0E	0.0	0.0	18	5.2	0.0	1.1	0.0	21
22	0.0E	0.0E	0.0E	0.0E	0.0E	0.0	0.0	17	0.0	0.0	0.0	0.0	22
23	0.0E	0.0E	0.0E	0.0E	0.0E	0.0	0.0	17	0.0	0.0	0.0	0.0	23
24	0.0E	0.0E	0.0E	0.0E	0.0E	0.0	0.0	17	0.0	0.0	0.0	0.0	24
25	0.0E	0.0E	0.0E	0.0E	0.0E	0.0	1.7	20 *	0.0	0.0	0.0	0.0	25
26	0.0E	0.0E	0.0E	0.0E	0.0E	0.0	3.8	16	0.0	0.0	0.0	0.0	26
27	0.0E	0.0E	0.0E	0.0E	0.0E	0.0	5.7*	14	0.0	0.0	0.0	0.0	27
28	0.0E	0.0E	0.0E	0.0E	0.0E	0.0	9.6*	15	0.0	0.0	0.0	0.0	28
29	0.0E	0.0E	0.0E	0.0E	0.0E	0.0	11 *	20	0.0	0.0	0.0	0.0	29
30	0.0E	0.0E	0.0E	0.0E	0.0E	0.0	12 *	17	0.0	0.0	0.0	0.0	30
31	0.0*	0.0E	0.0E	0.0E	0.0E	0.0	0.0	13	0.0	0.0	0.8	0.0	31
MEAN	0.0E	0.0E	0.0E	0.0E	0.0E	0.0E	1.5	15.3	6.3	0.0	0.1	0.0	MEAN
MAX.	0.0E	0.0E	0.0E	0.0E	0.0E	0.0E	12.0	20.0	16.0	0.0	1.1	0.0	MAX.
MIN.	0.0E	0.0E	0.0E	0.0E	0.0E	0.0E	0.0	3.6	0.0	0.0	0.0	0.0	MIN.
AC. FT.							87	942	374		5		AC. FT.

E - ESTIMATED
 NR - NO RECORD
 * - DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # - E AND *
 a - See note (a) below.

MEAN
DISCHARGE
1.9

MAXIMUM
DISCHARGE
GAGE HT.
MO. DAY TIME

MINIMUM
DISCHARGE
GAGE HT.
MO. DAY TIME

TOTAL
ACRE FEET
1408

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
36 03 26	119 04 13	SE32 21S 27E				DEC 42-DATE		1942		0.00	LOCAL

Station located 3.1 mi. SW of Porterville, approximately 3100 ft. below head. This is regulated diversion from Tule River. This station is operated under cooperative agreement between Department of Water Resources and the Tule River Association. Records for July, August, and September furnished by the Tule River Association and reviewed by the Department of Water Resources.

(a) During extended periods of estimated no flow the recorder at this station was deactivated. The recorder was activated prior to anticipated diversions upon notification from the Tule River Association.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	C03948	WOODS-CENTRAL DITCH NEAR PORTERVILLE ^a

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0.0E	0.0E	0.0E	22	0.0	0.0E	0.0*	0.0*	0.0*	0.0*	0.0	0.0	1
2	0.0E	0.0E	0.0E	21 *	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	2
3	0.0E	0.0E	0.0E	21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3
4	0.0E	0.0E	0.0E	21	0.0*	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	4
5	0.0E	0.0E	0.0E	19	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	5
6	0.0E	0.0E	0.0E	19	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	6
7	0.0E	0.0E	0.0E	19	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	7
8	0.0E	0.0E	0.0E	16	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	8
9	0.0E	0.0E	0.0E	18	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	9
10	0.0E	0.0E	0.0E	18	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	10
11	0.0E	0.0E	0.0E	19	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	11
12	0.0E	0.0E	0.0E	20	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	12
13	0.0E	0.0E	0.0E	19 *	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	13
14	0.0E	0.0E	0.0E	19	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	14
15	0.0E	0.0E	0.0E	7.9*	0.0	0.0E	0.0	0.0*	0.0	0.0	0.0	0.0	15
16	0.0E	0.0E	0.0E	3.1	0.0	0.0E	0.0*	0.0	0.0*	0.0	0.0	0.0	16
17	0.0E	0.0E	17	0.0*	0.0	0.0*	0.0	0.0	0.0	0.0	0.0	0.0	17
18	0.0E	0.0E	28 *	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18
19	0.0E	0.0E	21	0.0	0.0E	0.0	0.0	0.0*	0.0	0.0	0.0	0.0	19
20	0.0E	0.0E	16	0.0*	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20
21	0.0E	0.0E	24	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21
22	0.0E	0.0E	24	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22
23	0.0E	0.0E	24 *	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23
24	0.0E	0.0E	24	0.0	0.0E	0.9	0.0	0.0	0.0	0.0	0.0	0.0	24
25	0.0E	0.0E	22	0.0	0.0E	0.2	0.0	0.0	0.0	0.0	0.0	0.0	25
26	0.0E	0.0E	21	0.0	0.0E	0.1	0.0	0.0	0.0	0.0	0.0	0.0	26
27	0.0E	0.0E	21	0.0	0.0E	0.2	0.0	0.0	0.0	0.0	0.0	0.0	27
28	0.0E	0.0E	21 *	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28
29	0.0E	0.0E	21	0.0	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29
30	0.0E	0.0E	21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30
31	0.0E	0.0E	21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31
MEAN	0.0E	0.0E	10.5E	9.1	0.0E	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	MEAN
MAX.	0.0E	0.0E	28.0E	22.0	0.0E	0.9E	0.0	0.0	0.0	0.0	0.0	0.0	MAX.
MIN.	0.0E	0.0E	0.0E	0.0	0.0E	0.0E	0.0	0.0	0.0	0.0	0.0	0.0	MIN.
AC. FT.			647	559		3							AC. FT.

E - ESTIMATED

NR - NO RECORD

* - DISCHARGE MEASUREMENT OR
OBSERVATION OF NO FLOW

- E AND *

a - See note (a) below.

MEAN
DISCHARGE
0.8

MAXIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME

MINIMUM				
DISCHARGE	GAGE HT.	MO.	DAY	TIME
0.0E		10	1	0000

TOTAL
ACRE FEET
1209

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
36 04 18	119 05 48	SE30 21S 27E				DEC 42-DATE		1942		0.00	LOCAL

Station located 4.5 mi. W of Porterville, approximately 100 ft. below head. This is regulated diversion from Tule River. This station is operated under cooperative agreement between the Department of Water Resources and the Tule River Association. Records for July, August, and September furnished by the Tule River Association and reviewed by the Department of Water Resources.

(a) During extended periods of estimated no flow the recorder at this station was deactivated. The recorder was activated prior to anticipated diversions upon notification from the Tule River Association.

TABLE B-4 (Cont.)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1964	C05150	KERN RIVER NEAR BAKERSFIELD

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	1574	624	432	344	369	397	473	443	855	1412	646	320	1
2	1550	617	437	353	385	441	479	446	960	1305	655	260	2
3	1497	608	430	343	422	438	454	444	1144	1225	655	188	3
4	1520	593	411	353	424	448	448	443	1082	1221	653	170	4
5	1500	588	404	347	421	453	456	451	1039	1234	642	160	5
6	1468	572	393	338	430	513	447	476	1054	1237	654	164	6
7	1477	565	360	333	442	499	428	451	1169	1263	625	176	7
8	1446	523	364	324	417	484	442	458	1213	1304	608	198	8
9	1393	529	374	318	408	497	444	463	1235	1321	594	154	9
10	1280	539	368	302	398	499	447	461	1258	1377	601	215	10
11	1049	534	365	284	326	488	448	434	1298	1402	625	218	11
12	1057	543	365	286	316	485	445	462	1265	1413	598	173	12
13	1066	579	364	292	306	489	446	449	1253	1415	583	221	13
14	1074	594	368	328	297	467	445	448	1288	1445	537	228	14
15	1091	588	389	330	272	482	435	438	1342	1439	458	220	15
16	1041	583	401	328	261	468	496	443	1440	1379	460	235	16
17	728	550	402	328	283	462	520	439	1356	1306	471	211	17
18	783	446	403	312	310	443	547	443	1313	1265	470	183	18
19	853	437	395	279	315	466	487	457	1518	1258	462	177	19
20	859	438	372	277	309	446	456	446	1498	1176	459	160	20
21	863	459	374	298	340	443	449	451	1419	1086	422	165	21
22	867	490	382	330	387	468	449	451	1394	1110	393	182	22
23	865	502	354	320	400	472	455	459	1394	1103	413	173	23
24	803	498	342	329	412	463	468	455	1208	1008	410	162	24
25	825	469	341	355	421	452	469	498	1141	983	404	138	25
26	830	459	333	387	418	449	475	448	1418	937	406	144	26
27	839	458	338	381	416	442	467	449	1489	682	393	145	27
28	604	442	341	374	393	463	466	457	1535	639	361	158	28
29	584	449	341	348	366	456	452	458	1465	618	373	130	29
30	645	441	335	359		458	464	470	1409	626	375	112	30
31	653		340	383		454		753		646	386		31
AN.	1054	524	375	331	368	464	462	463	1282	1156	509	185	MEAN
AX.	1668	629	439	387	442	513	547	753	1518	1445	655	320	MAX.
IN.	557	426	331	277	261	397	428	434	855	618	361	112	MIN.
FT.	64828	31174	23044	20356	21152	28532	27485	28451	76268	71078	31323	10989	AC. FT.

- ESTIMATED
- NO RECORD
- DISCHARGE MEASUREMENT OR
OBSERVATION OF NO FLOW
- E AND *

MEAN
DISCHARGE
598

MAXIMUM
DISCHARGE
GAGE HT.
MO.
DAY
TIME

MINIMUM
DISCHARGE
GAGE HT.
MO.
DAY
TIME

TOTAL
ACRE FEET
434680

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B.B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
35 26 9	118 56 8	SW 2 29S 28E	36000	14.2	11-19-50	93-DATE					

Also known as "Kern River at First Point." Station located 5 mi. NE of Bakersfield. Tabulated discharge is the computed regulated flow and is computed from noon to noon beginning at noon of day shown. Records furn. by Kern County Land Company. Drainage area is 2,420 sq. mi.

TABLE B-5

DAILY MEAN GAGE HEIGHT
 (IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	C03110	TULARE LAKE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DA
1													1
2													2
3													3
4													4
5													5
6													6
7													7
8													8
9													9
10													10
11													11
12													12
13													13
14													14
15													15
16													16
17													17
18													18
19													19
20													20
21													21
22													22
23													23
24													24
25													25
26													26
27													27
28													28
29													29
30													30
31													31

D R Y

CREST STAGES

E — ESTIMATED
 NR — NO RECORD
 NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE		
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE
			C.F.S.	GAGE HT.	DATE			FROM	TO	
30 03 10	119 49 35			196.8	6-28-41		FEB 37-DATE	1937		0.00

Station located 2.2 mi. SW of Chatom Ranch, 6 mi. SW of Corcoran on south end of El Rico Bridge. Tulare Lake receives water from Kings, Kaweah, and Tule Rivers during high-water periods and occasionally from Kern River, Deer Creek, and several small intermittent streams. Elevation at lowest point of lake bed is now about 180 ft. U.S.G.S. datum. Records furn. by Tulare Lake Basin Water Storage District.

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	807885	SAN JOAQUIN RIVER BELOW FRIANT

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	2.11	1.95	1.89	1.91	1.89	2.24	2.12	2.34	2.35	2.52	2.54	2.42	1
2	2.11	1.95	1.89	1.91	1.89	2.24	2.07	2.36	2.33	2.56	2.54	2.42	2
3	2.11	1.95	1.90	1.91	1.90	2.22	2.09	2.37	2.32	2.56	2.54	2.42	3
4	2.11	1.95	1.90	1.91	1.90	2.20	2.14	2.36	2.32	2.56	2.60	2.41	4
5	2.11	1.96	1.90	1.91	1.90	2.20	2.14	2.36	2.32	2.55	2.59	2.38	5
6	2.11	1.96	1.90	1.91	1.94	2.20	2.12	2.34	2.33	2.56	2.58	2.35	6
7	2.10	1.96	1.90	1.91	1.99	2.20	2.09	2.32	2.33	2.54	2.58	2.35	7
8	2.09	1.96	1.90	1.91	1.99	2.20	2.09	2.32	2.35	2.56	2.57	2.35	8
9	2.07	1.96	1.90	1.92	2.00	2.20	2.15	2.32	2.38	2.59	2.57	2.35	9
10	2.07	1.96	1.90	1.92	2.00	2.18	2.20	2.32	2.35	2.62	2.59	2.35	10
11	2.05	1.96	1.90	1.92	2.00	2.15	2.23	2.32	2.33	2.64	2.60	2.35	11
12	1.99	1.96	1.90	1.92	2.00	2.13	2.23	2.32	2.33	2.64	2.60	2.36	12
13	1.99	1.96	1.90	1.92	2.00	2.10	2.23	2.32	2.32	2.63	2.58	2.36	13
14	1.99	1.97	1.90	1.92	2.03	2.10	2.24	2.33	2.32	2.63	2.56	2.36	14
15	1.99	1.98	1.90	1.92	2.07	2.10	2.27	2.34	2.32	2.63	2.56	2.37	15
16	2.00	1.97	1.90	1.92	2.08	2.10	2.36	2.35	2.32	2.63	2.56	2.37	16
17	2.00	1.97	1.90	1.91	2.10	2.10	2.37	2.35	2.35	2.63	2.56	2.37	17
18	1.99	1.97	1.90	1.93	2.13	2.10	2.37	2.35	2.37	2.61	2.55	2.37	18
19	1.99	1.97	1.90	1.95	2.14	2.11	2.38	2.35	2.37	2.60	2.54	2.37	19
20	1.99	1.96	1.91	1.95	2.14	2.12	2.38	2.35	2.36	2.60	2.54	2.37	20
21	2.01	1.90	1.91	1.97	2.14	2.12	2.38	2.35	2.36	2.60	2.54	2.37	21
22	2.00	1.90	1.90	1.95	2.14	2.14	2.38	2.35	2.40	2.60	2.54	2.33	22
23	2.00	1.90	1.90	1.90	2.13	2.10	2.37	2.35	2.43	2.62	2.54	2.29	23
24	2.00	1.90	1.90	1.90	2.15	2.05	2.35	2.35	2.42	2.65	2.54	2.29	24
25	2.00	1.90	1.90	1.90	2.14	2.01	2.33	2.34	2.44	2.65	2.54	2.29	25
26	2.00	1.89	1.91	1.90	2.13	2.00	2.28	2.34	2.49	2.64	2.54	2.29	26
27	1.99	1.88	1.91	1.90	2.23	2.02	2.28	2.34	2.49	2.64	2.54	2.30	27
28	2.00	1.88	1.91	1.90	2.25	2.05	2.28	2.34	2.49	2.63	2.46	2.30	28
29	2.00	1.89	1.91	1.90	2.24	2.05	2.28	2.34	2.49	2.63	2.41	2.30	29
30	2.00	1.89	1.91	1.90		2.05	2.32	2.34	2.49	2.59	2.41	2.30	30
31	1.97		1.91	1.90		2.11		2.34		2.54	2.42		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
7-24-64	0900	2.67									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
36 59 04	119 43 24	SW7 11S 21E	77,200	23.8	12/11/37	OCT 07-DATE		1938	---	294.00	USGS

Station located 1 mile downstream from Friant Dam. Flow regulated by Millerton Lake.
Records furnished by U.S.G.S. Drainage area is 1,675 sq. mi.

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	864200	CHOWCHILLA RIVER NEAR RAYMOND

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	NR	NR	NR	NR	NR	NR	69.90	NR	NR	NR	NR	NR	1
2	NR	NR	NR	NR	NR	NR	70.68	NR	NR	NR	NR	NR	2
3	NR	NR	NR	NR	NR	NR	70.13	NR	NR	NR	NR	NR	3
4	NR	NR	NR	NR	NR	NR	69.88	NR	NR	NR	NR	NR	4
5	NR	NR	NR	NR	NR	NR	69.74	NR	NR	NR	NR	NR	5
6	NR	NR	NR	NR	NR	NR	69.68	NR	NR	NR	NR	NR	6
7	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	7
8	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	8
9	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	9
10	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	10
11	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	11
12	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	12
13	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	13
14	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	14
15	NR	70.27	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	15
16	NR	70.01	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	16
17	NR	69.32E	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	17
18	NR	69.52E	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	18
19	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	19
20	NR	71.42	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	20
21	NR	70.88	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	21
22	NR	69.84E	NR	70.50	NR	NR	NR	NR	NR	NR	NR	NR	22
23	NR	69.43E	NR	70.31	NR	NR	NR	NR	NR	NR	NR	NR	23
24	NR	69.88E	NR	69.88E	NR	70.23	NR	NR	NR	NR	NR	NR	24
25	NR	69.90	NR	NR	NR	70.09	NR	NR	NR	NR	NR	NR	25
26	NR	69.53E	NR	NR	NR	69.89	NR	NR	NR	NR	NR	NR	26
27	NR	69.44	NR	NR	NR	70.13	NR	NR	NR	NR	NR	NR	27
28	NR	NR	NR	NR	NR	70.07	NR	NR	NR	NR	NR	NR	28
29	NR	NR	NR	NR	NR	69.89	NR	NR	NR	NR	NR	NR	29
30	NR	NR	NR	NR	NR	69.77	NR	NR	NR	NR	NR	NR	30
31	NR	NR	NR	NR	NR	69.65	NR	NR	NR	NR	NR	NR	31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
11-20-64	1130	73.30									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 15 36	119 56 42	SE 1 8S 22E	8497E	83.9	2- 1-63	NOV 59-SEP 62	OCT 62-DATE	1959		0.00	USCGS

Station located 6.0 mi. NW of Raymond on Raymond Road. Elevation of station is approximately 600 ft. USCGS datum. This station was installed in cooperation with Madera County and Chowchilla Water District. It is a flood control warning station, equipped with a Stevens Surface Detector and Telemark. Low flows are not recorded. Prior to 1962, high flow records were insufficient for publication. Discharge measurements and partial flow records are available in DWR files. In order to machine process this station, the recorder datum was changed. To obtain true elevations add 500 feet to all of the above gage heights.

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	B07575	SAN JOAQUIN RIVER ABOVE SAND SLOUGH

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1		NF	10.93										1
2		NF	10.72										2
3		NF	10.54										3
4		NF	NF										4
5		NF	NF										5
6		NF	NF										6
7		NF	NF										7
8		NF	NF										8
9		NF	NF										9
10		NF	NF										10
11		NF	NF										11
12	N	NF	NF	N	N	N	N	N	N	N	N	N	12
13	O	NF	NF	O	O	O	O	O	O	O	O	O	13
14		NF	NF										14
15		NF	NF										15
16	F	NF	NF	F	F	F	F	F	F	F	F	F	16
17	L	NF	NF	L	L	L	L	L	L	L	L	L	17
18	O	NF	NF	O	O	O	O	O	O	O	O	O	18
19	W	NF	NF	W	W	W	W	W	W	W	W	W	19
20		NF	NF										20
21		NF	NF										21
22		NF	NF										22
23		10.73	NF										23
24		11.59	NF										24
25		11.55	NF										25
26		11.44	NF										26
27		11.59	NF										27
28		11.57	NF										28
29		11.39	NF										29
30		11.16	NF										30
31			NF										31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
11-27-63	1850	11.65									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	OATE			FROM	TO		
37 06 36	120 35 24	NE31 9S 13E	2110	6.55	2/12/62	OCT 61-SEP 62	OCT 62-DATE	1961		0.00	USCGS

Station located 5 mi. NW of Santa Rita Bridge and 5 mi. W of El Nido. Flows sometimes affected by operation of control structures below station. During this period flows are not computed. Partial flow records and discharge measurement are available in the office of the San Joaquin Valley Branch of the Department of Water Resources. In order to machine process this station, the recorder datum was changed. To obtain true elevations add 90 feet to all of the above gage heights.

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	807400	SAN JOAQUIN RIVER NEAR STEVINSON

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	61.28	60.72	60.87	60.79	60.96	60.82	61.10	61.12	61.82	61.02	60.94	61.18	1
2	61.21	60.69	60.81	60.82	60.96	60.83	61.15	61.10	61.82	60.85	60.95	61.14	2
3	61.13	60.67	60.82	60.96	60.92	60.80	61.14	61.08	61.56	60.92	61.04	61.13	3
4	61.10	60.64	60.84	61.08	60.93	60.77	61.18	61.11	61.19	60.91	61.12	61.09	4
5	61.17	60.66	60.81	61.00	60.85	60.76	61.06	61.16	61.02	60.87	61.10	61.00	5
6	61.17	60.67	60.78	61.63	60.83	60.81	60.96	61.29	61.03	60.83	61.05	60.91	6
7	61.16	60.66	60.84	62.08	60.82	60.81	60.98	51.28	60.98	60.80	60.97	60.93	7
8	61.27	60.66	60.87	61.55	60.70	60.84	61.00	61.17	60.98	60.83	60.85	60.96	8
9	61.37	60.62	60.84	61.21	60.70	60.87	60.95	61.22	61.05	60.87	60.85	60.89	9
10	61.29	60.61	60.84	61.17	60.70	60.91	60.86	61.21	61.25	60.90	60.90	60.85	10
11	61.13	60.64	60.81	61.14	60.61	60.90	60.84	61.19	61.59	60.87	60.85	60.83	11
12	61.26	60.77	60.69	61.09	60.61	60.93	60.79	61.31	62.14	60.87	60.84	60.80	12
13	61.32	60.78	60.65	61.26	60.61	60.97	60.86	61.35	62.43	60.93	60.87	60.79	13
14	61.32	60.70	60.65	61.26	60.62	61.02	60.96	61.32	62.07	60.91	60.87	60.76	14
15	61.55	60.74	60.70	61.26	60.94	61.09	60.99	61.20	61.63	61.00	60.88	60.75	15
16	61.58	60.88	60.79	61.17	61.14	61.12	60.95	61.16	61.38	61.02	60.93	60.74	16
17	61.26	60.92	60.78	61.06	60.83	61.10	61.00	61.12	61.24	60.94	60.94	60.73	17
18	61.26	60.95	60.78	60.98	60.85	61.01	61.02	61.11	61.19	60.88	60.91	60.71	18
19	61.36	60.96	60.77	60.94	60.77	61.12	61.06	61.14	61.08	60.90	60.85	60.69	19
20	61.38	61.12	60.86	60.91	60.78	60.99	61.24	61.33	61.00	60.93	60.95	60.70	20
21	61.31	61.20	60.87	60.89	60.78	60.93	61.54	61.53	60.97	60.95	60.96	60.68	21
22	61.31	61.22	60.82	61.38	60.76	60.93	61.20	61.50	61.00	61.01	61.01	60.73	22
23	61.17	61.25	60.77	61.97	60.76	60.94	61.04	61.51	61.11	61.00	61.06	60.79	23
24	61.11	61.21	60.77	62.09	60.76	60.99	61.09	61.63	61.22	60.99	61.07	60.72	24
25	61.11	61.17	60.80	62.08	60.73	61.14	61.16	61.75	61.18	60.99	61.11	60.71	25
26	61.17	61.11	60.84	61.89	60.75	61.17	61.18	61.72	61.06	60.97	61.21	60.72	26
27	61.12	61.03	60.82	61.68	60.83	61.11	61.16	61.71	60.98	60.92	61.21	60.73	27
28	61.07	60.98	60.77	61.27	60.85	61.13	61.16	61.70	61.02	60.87	61.14	60.76	28
29	61.03	60.95	60.75	60.94	60.80	61.13	61.14	61.72	61.01	60.90	61.10	60.80	29
30	60.90	60.92	60.77	60.82		61.05	61.11	61.70	61.05	60.95	61.13	60.81	30
31	60.77		60.75	60.90		61.05		61.67		60.93	61.14		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
1-24-64	1600	62.38									
6-12-64	2100	62.48									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B.B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 17 42	120 51 00	26 7S 10E	6060	73.04	2-17-62	OCT 61-DATE	MAY 61-SEP 61	1961		0.00	USCGS

Station located on bridge 2.3 miles south of Stevinson on Lander Avenue.

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	807375	SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	54.95	54.82	55.33	54.93	55.48	54.88	55.22	55.20	55.75	55.11	54.50	54.97	1
2	54.81	54.83	55.20	54.96	55.49	54.88	55.28	55.12	55.80	55.05	54.55	55.16	2
3	54.73	54.84	55.12	54.97	55.48	54.93	55.36	55.20	55.71	55.01	54.60	55.13	3
4	54.86	54.83	55.07	55.03	55.44	54.94	55.27	55.34	55.55	54.95	54.80	55.10	4
5	54.92	54.79	55.02	55.21	55.38	54.99	55.21	55.36	55.38	54.87	54.84	55.07	5
6	55.00	NR	54.95	55.36	55.32	55.03	55.14	55.49	55.31	54.81	54.83	54.96	6
7	54.99	NR	54.96	55.88	55.28	55.01	55.12	55.52	55.21	54.79	54.78	54.97	7
8	54.86	54.60	55.03	56.04	55.13	54.99	55.06	55.46	55.05	54.74	54.65	54.91	8
9	55.00	54.59	55.05	55.87	55.10	55.09	54.96	55.33	55.26	54.64	54.59	54.84	9
10	54.93	54.52	55.08	55.78	55.10	55.19	54.78	55.37	55.42	NR	54.68	54.67	10
11	54.85	54.54	55.15	55.73	55.11	55.16	54.64	55.45	55.77	54.67	54.67	54.68	11
12	54.88	54.61	55.24	55.66	55.01	55.22	54.73	55.45	56.05	54.71	54.78	54.63	12
13	55.13	54.73	55.31	55.64	54.98	55.29	54.85	55.52	56.26	54.68	54.64	54.50	13
14	55.20	54.82	55.33	55.65	54.94	55.33	55.08	55.46	56.16	54.81	54.46	54.54	14
15	54.97	54.82	55.34	55.63	55.01	55.40	55.18	55.22	55.89	54.84	54.55	54.66	15
16	55.05	54.87	55.30	55.59	55.31	55.47	55.16	55.07	55.62	54.78	54.75	54.62	16
17	54.92	55.13	55.23	55.50	55.18	55.44	55.12	55.05	55.41	54.68	54.77	54.53	17
18	NR	55.29	55.21	55.42	55.13	55.30	55.12	55.11	55.24	54.58	54.74	54.63	18
19	NR	55.31	55.26	55.39	55.07	55.15	55.21	55.24	55.12	54.45	54.65	54.59	19
20	54.80	55.32	55.25	55.36	55.03	54.90	55.36	55.42	54.99	54.48	54.47	54.42	20
21	54.82	55.42	55.20	55.38	55.03	54.79	55.48	55.49	55.05	54.61	54.48	54.46	21
22	NR	55.52	55.06	55.35	55.02	54.71	55.38	55.49	55.02	54.62	54.46	54.44	22
23	54.77	55.57	55.04	55.69	54.98	54.69	55.31	55.51	55.06	54.59	54.66	54.45	23
24	54.73	55.51	55.06	55.74	54.98	54.78	55.28	55.52	55.09	54.66	54.85	54.37	24
25	NR	55.50	55.03	55.93	54.86	54.93	55.40	55.66	55.01	54.64	54.88	54.47	25
26	NR	55.46	55.05	55.77	54.78	54.98	55.43	55.79	54.90	54.66	54.89	54.57	26
27	NR	55.42	55.05	55.70	54.82	54.98	55.34	55.76	54.86	54.72	54.96	54.64	27
28	54.73	55.38	55.00	55.52	54.83	55.09	55.32	55.78	54.91	NR	54.92	54.64	28
29	54.80	55.40	54.98	55.42	54.87	55.22	55.35	55.80	55.05	NR	54.72	54.59	29
30	54.80	55.41	54.97	55.38		55.24	55.71	55.14		NR	54.75	54.58	30
31	54.80		54.94	55.41		55.20		55.67		54.54	54.83		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
6-13-64	1000	56.33									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 18 35	120 55 45		5910	71.14	4- 6-58	MAR 37-DATE		1944	1957	-3.73	USCGS
								1957	1959	-3.77	USCGS
								1959		0.00	USCGS

Station located 30 ft. below Fremont Ford Bridge, 4.5 mi. W of Stevinson, 6.7 mi. above the Merced River. During periods of high flow, some water bypasses station through Mud Slough. Maximum discharge of record is for period 1944 to date. Records furnished by U.S.G.S. Drainage area is approx. 8,090 sq. mi. Flow records are published in U.S.G.S. report "Surface Water Records of California."

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	805170	MERCED RIVER BELOW SNELLING

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	5.46	5.25	5.31	5.25	5.33	5.29	5.44	5.80	5.64	5.83	5.91	5.84	1
2	5.59	5.25	5.30	5.24	5.33	5.27	5.42	5.83	5.63	5.81	5.91	5.83	2
3	5.88	5.27	5.31	5.24	5.33	5.25	5.42	5.92	5.66	5.83	5.90	5.83	3
4	5.35	5.28	5.31	5.27	5.32	5.26	5.36	5.95	5.65	5.87	5.90	5.76	4
5	5.25	5.33	5.32	5.32	5.31	5.24	5.27	6.02	5.62	5.85	5.89	5.77	5
6	5.15	5.40	5.32	5.33	5.31	5.27	5.24	6.03	5.66	5.84	5.84	5.65	6
7	5.11	5.34	5.31	5.34	5.31	5.29	5.27	6.03	5.69	5.85	5.84	5.67	7
8	5.03	5.31	5.30	5.34	5.35	5.28	5.18	5.91	5.71	5.86	5.82	5.60	8
9	5.00	5.30	5.32	5.32	5.35	5.27	5.20	5.88	5.88	5.85	5.84	5.41	9
10	5.01	5.32	5.30	5.34	5.42	5.27	5.27	5.84	6.02	5.86	5.86	5.25	10
11	5.22	5.33	5.29	5.34	5.41	5.29	5.45	5.75	5.95	5.91	5.87	5.03	11
12	5.16	5.33	5.26	5.32	5.41	5.36	5.44	5.73	5.93	5.93	5.90	5.25	12
13	5.10	5.31	5.26	5.32	5.41	5.33	5.40	5.71	5.88	5.94	5.88	5.22	13
14	5.08	5.36	5.25	5.32	5.39	5.31	5.36	5.86	5.77	6.68	5.87	5.03	14
15	5.09	5.48	5.27	5.32	5.34	5.29	5.55	5.85	5.73	5.84	5.89	4.99	15
16	5.12	5.38	5.26	5.31	5.37	5.30	5.73	5.77	5.84	5.79	5.88	4.92	16
17	5.17	5.37	5.25	5.31	5.34	5.30	5.81	5.76	5.86	5.75	5.93	4.85	17
18	5.18	5.37	5.25	5.33	5.36	5.30	5.72	5.74	5.68	5.71	5.93	4.83	18
19	5.16	5.44	5.27	5.33	5.35	5.30	5.79	5.72	5.75	5.74	5.88	4.81	19
20	5.16	5.57	5.27	5.33	5.35	5.28	5.86	5.67	5.82	5.71	5.93	4.80	20
21	5.15	5.48	5.26	5.45	5.34	5.26	5.86	5.68	5.83	5.69	6.05	4.78	21
22	5.13	5.42	5.27	5.45	5.33	5.27	5.86	5.73	5.87	5.68	5.88	4.78	22
23	5.16	5.45	5.26	5.54	5.33	5.32	5.91	5.73	5.86	5.76	5.68	4.78	23
24	5.16	5.47	5.26	5.42	5.33	5.36	5.94	5.76	5.83	5.94	5.25	4.76	24
25	5.17	5.40	5.28	5.37	5.31	5.36	5.86	5.79	5.84	5.87	5.58	4.75	25
26	5.16	5.40	5.26	5.37	5.24	5.36	5.84	5.83	5.89	5.83	5.71	4.74	26
27	5.18	5.39	5.27	5.35	5.23	5.33	5.85	5.86	5.88	5.81	5.72	4.74	27
28	5.18	5.33	5.27	5.34	5.25	5.30	5.83	5.78	5.83	5.90	5.80	4.74	28
29	5.22	5.31	5.27	5.34	5.27	5.29	5.80	5.75	5.86	5.89	5.78	4.75	29
30	5.27	5.31	5.26	5.34	5.25	5.25	5.79	5.65	5.85	5.93	5.79	4.74	30
31	5.20		5.26	5.35		5.22		5.63		5.94	5.80		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
10- 3-63	0630	6.59									
7-14-64	1440	9.35									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			G.F.S.	GAGE HT.	DATE			FROM	TO		
37 30 06	120 27 03	NE17 5S 14E	4910	12.51	5-10-63	NOV 58-DATE		1958		0.00	LOCAL

Station located 0.2 mi. below Merced-Snellings Highway Bridge, 1.4 mi. SW of Snelling. Flow regulated by Exchequer power plant and Lake McClure. Prior to November 1958, records available for a site 3.6 mi. downstream.

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	805155	MERCED RIVER AT CRESSEY

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	10.62	10.55	10.76	10.56	10.60	10.25	10.30	10.30	10.54	10.43	10.51	10.85	1
2	10.62	10.57	10.75	10.57	10.58	10.26	10.30	10.31	10.57	10.42	10.60	10.82	2
3	10.66	10.58	10.74	10.57	10.58	10.29	10.29	10.39	10.48	10.35	10.62	10.89	3
4	10.84	10.59	10.74	10.58	10.57	10.29	10.26	10.45	10.49	10.36	10.64	10.87	4
5	10.80	10.59	10.74	10.58	10.56	10.29	10.24	10.51	10.46	10.42	10.54	10.90	5
6	10.65	10.59	10.74	10.57	10.54	10.32	10.25	10.59	10.43	10.55	10.63	10.87	6
7	10.59	10.65	10.74	10.57	10.53	10.38	10.23	10.70	10.48	10.59	10.64	10.82	7
8	10.52	10.66	10.73	10.58	10.52	10.37	10.21	10.80	10.55	10.55	10.64	10.82	8
9	10.48	10.64	10.72	10.57	10.51	10.34	10.19	10.71	10.62	10.54	10.62	10.85	9
10	10.44	10.63	10.72	10.57	10.52	10.31	10.17	10.69	10.77	10.52	10.67	10.83	10
11	10.56	10.63	10.70	10.56	10.51	10.33	10.18	10.66	10.85	10.55	10.63	10.75	11
12	10.64	10.63	10.70	10.56	10.49	10.38	10.19	10.59	10.85	10.44	10.57	10.69	12
13	10.66	10.63	10.69	10.55	10.47	10.39	10.21	10.49	10.78	10.45	10.55	10.65	13
14	10.62	10.65	10.68	10.57	10.46	10.40	10.27	10.41	10.68	10.43	10.73	10.66	14
15	10.58	10.72	10.67	10.58	10.47	10.40	10.27	10.34	10.68	11.56	10.76	10.59	15
16	10.59	10.79	10.65	10.56	10.49	10.37	10.27	10.28	10.60	11.07	10.78	10.62	16
17	10.61	10.79	10.66	10.57	10.48	10.34	10.41	10.26	10.60	10.71	10.82	10.64	17
18	10.63	10.77	10.66	10.58	10.47	10.33	10.47	10.32	10.59	10.61	10.82	10.67	18
19	10.64	10.78	10.64	10.57	10.46	10.34	10.57	10.28	10.55	10.51	10.81	10.71	19
20	10.63	10.84	10.64	10.57	10.46	10.34	10.69	10.22	10.46	10.40	10.87	10.70	20
21	10.61	10.88	10.64	10.62	10.46	10.32	10.66	10.22	10.39	10.41	10.88	10.63	21
22	10.59	10.88	10.63	10.81	10.45	10.30	10.69	10.30	10.38	10.41	10.95	10.59	22
23	10.59	10.84	10.61	11.73	10.45	10.33	10.67	10.38	10.40	10.44	11.13	10.63	23
24	10.58	10.84	10.61	11.20	10.46	10.35	10.61	10.41	10.43	10.38	11.09	10.58	24
25	10.58	10.84	10.62	10.92	10.40	10.35	10.62	10.41	10.46	10.37	10.96	10.61	25
26	10.57	10.83	10.61	10.78	10.32	10.35	10.60	10.44	10.44	10.46	10.73	10.58	26
27	10.58	10.81	10.62	10.69	10.30	10.36	10.56	10.52	10.37	10.50	10.74	10.64	27
28	10.59	10.80	10.60	10.65	10.28	10.35	10.46	10.51	10.33	10.47	10.87	10.50	28
29	10.58	10.79	10.59	10.62	10.27	10.33	10.35	10.59	10.33	10.43	10.87	10.38	29
30	10.55	10.78	10.58	10.60		10.32	10.34	10.59	10.35	10.40	10.95	10.44	30
31	10.55		10.57	10.61		10.31		10.57		10.43	10.96		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
1-23-64	1210	11.92									
7-15-64	1220	12.40									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 25 28	120 39 47	SW 9 6S 12E	34400	22.67	12- 4-50	JUL 41-DATE	APR 41-JUL 41	1950		96.24	USCGS

Station located 150 ft. below McSwain Bridge, immediately N of Cressey. Prior to May 20, 1960, station located 250 ft. upstream.

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	B05138	MERCED RIVER NEAR LIVINGSTON

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	11.58	11.07	11.28	11.13	11.21	10.95	11.00	11.08	11.17	10.98	10.82	11.24	1
2	11.43	11.07	11.25	11.13	11.18	10.90	10.94	11.04	11.22	10.92	11.10	11.09	2
3	11.34	11.08	11.24	11.15	11.18	10.92	10.92	11.09	11.07	10.92	11.06	11.10	3
4	11.32	11.08	11.22	11.15	11.16	10.93	10.89	11.29	10.97	10.88	11.07	11.12	4
5	11.58	11.10	11.21	11.14	11.17	10.90	10.92	11.24	11.09	10.94	11.00	11.12	5
6	11.38	11.10	11.20	11.13	11.16	10.91	11.03	11.48	11.15	11.07	10.92	11.10	6
7	11.29	11.13	11.19	11.14	11.14	10.98	10.99	11.43	11.18	11.04	10.90	11.04	7
8	11.27	11.16	11.21	11.14	11.13	11.05	10.90	11.45	11.21	10.96	11.00	11.03	8
9	11.33	11.15	11.22	11.14	11.12	10.99	10.88	11.53	11.61	10.96	11.04	11.04	9
10	11.12	11.13	11.22	11.13	11.12	10.97	10.84	11.43	11.54	10.98	11.15	11.02	10
11	11.22	11.12	11.22	11.12	11.12	11.00	10.88	11.48	11.46	10.99	11.03	11.02	11
12	11.23	11.13	11.21	11.12	11.14	11.13	10.86	11.22	11.51	11.00	11.23	10.97	12
13	11.25	11.12	11.20	11.12	11.13	11.06	10.86	11.15	11.52	10.95	11.14	10.94	13
14	11.23	11.14	11.19	11.12	11.11	11.02	10.77	11.12	11.39	10.86	10.98	10.92	14
15	11.20	11.18	11.18	11.12	11.10	11.06	10.82	11.05	11.30	11.15	11.19	10.89	15
16	11.21	11.23	11.17	11.13	11.11	11.05	10.90	10.88	11.28	11.99	11.14	10.87	16
17	11.15	11.27	11.19	11.13	11.10	11.05	10.90	11.03	11.30	11.48	11.17	10.86	17
18	11.15	11.25	11.19	11.13	11.10	11.03	11.08	11.08	11.24	11.22	11.18	10.87	18
19	11.16	11.25	11.17	11.12	11.10	10.95	11.29	11.01	11.19	11.22	11.14	10.96	19
20	11.14	11.31	11.15	11.12	11.08	10.92	11.35	10.90	11.12	11.16	11.13	10.97	20
21	11.13	11.34	11.15	11.18	11.08	10.91	11.31	10.87	11.17	10.92	11.15	10.94	21
22	11.12	11.37	11.15	11.25	11.07	10.96	11.39	10.99	11.27	10.95	11.17	10.84	22
23	11.12	11.35	11.14	11.91	11.06	10.94	11.54	10.98	10.95	10.93	11.24	10.86	23
24	11.10	11.33	11.14	12.12	11.07	10.98	11.49	11.16	10.84	10.80	11.36	10.84	24
25	11.08	11.34	11.15	11.71	11.02	10.97	11.34	11.07	10.89	10.75	11.24	10.85	25
26	11.08	11.33	11.14	11.50	10.98	10.97	11.78	10.98	10.87	10.95	11.07	10.77	26
27	11.07	11.33	11.14	11.39	10.91	10.97	11.73	11.30	10.87	11.03	10.91	10.73	27
28	11.07	11.31	11.14	11.30	10.86	10.99	11.54	11.26	10.91	10.94	11.01	10.75	28
29	11.06	11.30	11.13	11.26	10.90	11.06	11.10	11.22	10.97	10.82	11.08	10.74	29
30	11.06	11.29	11.13	11.23		10.99	11.16	11.22	11.08	10.79	11.14	10.69	30
31	11.05		11.12	11.21		10.96		11.20		10.71	11.28		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
1-23-64	2200	12.43									
7-16-64	0200	12.41									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 23 18	120 47 35	NW29 6S 11E	11100	21.44	2-12-38	MAR 22-SEP 24 OCT 25-FEB 44	JAN 51-JAN 60 APR 62-DATE	1962	DATE	79.5	USGS

Station located 4.5 mi. W of Livingston and 9.5 mi. upstream from mouth. Early discharge records, 1922-44, available in U.S.G.S. Water Supply Papers. Stage records from 1951-1960 were not published, available from D.W.R., State of California. Station reactivated April 1, 1962 for stage only. Drainage area, 1,259 sq. mi. In order to machine process this station, the recorder datum was changed. To obtain recorder gage heights subtract 10.00 feet from all of the above gage heights.

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	807300	SAN JOAQUIN RIVER NEAR NEWMAN

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	49.40	49.07	49.79	49.20	49.60	48.98	49.13	49.04	49.27	48.82	48.24	48.94	1
2	49.31	49.09	49.64	49.24	49.60	48.02	49.18	48.98	49.31	48.72	48.39	48.97	2
3	49.23	49.09	49.52	49.28	49.59	48.99	49.09	48.98	49.26	48.64	48.42	48.88	3
4	49.23	49.11	49.45	49.30	49.57	48.98	49.01	49.18	49.11	48.58	48.43	48.92	4
5	49.32	49.13	49.42	49.39	49.53	48.98	48.97	49.20	49.03	48.58	48.45	48.87	5
6	51.02	49.13	49.38	49.64	49.49	48.97	48.97	49.32	49.04	48.64	48.45	48.85	6
7	51.40	49.11	49.36	49.95	49.45	48.97	48.99	49.40	49.03	48.58	48.42	48.83	7
8	49.55	49.16	49.41	50.16	49.38	48.98	48.85	49.36	49.01	48.54	48.31	48.76	8
9	49.44	49.13	49.45	50.12	49.32	49.04	48.77	49.29	49.18	48.45	48.28	48.75	9
10	49.37	49.07	49.48	50.05	49.30	49.05	48.68	49.32	49.44	48.40	48.33	48.71	10
11	49.26	49.04	49.52	49.98	49.32	49.00	48.52	49.40	49.64	48.40	48.37	48.63	11
12	50.27	49.02	49.54	49.92	49.24	49.19	48.59	49.28	49.74	48.47	48.40	48.52	12
13	51.95	49.05	49.53	49.89	49.22	49.22	48.68	49.20	49.81	48.51	48.43	48.42	13
14	51.99	49.09	49.52	49.89	49.17	49.19	48.73	49.09	49.70	48.44	48.32	48.47	14
15	50.08	49.14	49.52	49.86	49.14	49.26	48.85	48.98	49.56	48.48	48.35	48.56	15
16	50.32	49.17	49.49	49.82	49.27	49.29	48.80	48.92	49.32	48.58	48.54	48.55	16
17	50.30	49.32	49.44	49.75	49.26	49.27	48.86	48.89	49.27	48.76	48.60	48.45	17
18	50.19	49.43	49.42	49.68	49.16	49.24	48.95	48.95	49.08	48.61	48.53	48.46	18
19	50.18	49.52	49.42	49.66	49.14	49.07	49.02	49.01	49.01	48.49	48.48	48.48	19
20	51.77	49.63	49.38	49.64	49.09	48.87	49.23	49.10	48.89	48.53	48.47	48.48	20
21	51.92	49.69	49.35	49.69	49.09	48.80	49.29	49.10	48.89	48.60	48.48	48.60	21
22	50.57	49.79	49.29	49.72	49.09	48.76	49.20	49.10	48.90	48.53	48.45	48.48	22
23	49.94	49.96	49.26	49.88	49.07	48.93	49.24	49.11	48.85	48.37	48.58	49.12	23
24	49.47	49.92	49.27	50.18	49.07	48.96	49.28	49.12	48.73	48.37	48.69	49.91	24
25	49.42	49.93	49.25	50.21	49.03	48.95	49.24	49.26	48.66	48.30	48.76	49.97	25
26	49.29	49.89	49.24	50.02	48.98	48.94	49.23	49.39	48.59	48.25	48.71	50.02	26
27	49.08	49.87	49.23	49.90	48.96	48.94	49.33	49.31	48.57	48.46	48.64	50.02	27
28	49.04	49.85	49.20	49.78	48.93	49.02	49.28	49.38	48.63	48.41	48.74	50.04	28
29	49.06	49.85	49.19	49.68	48.94	49.12	49.24	49.37	48.73	48.39	48.65	50.07	29
30	49.07	49.85	49.19	49.60		49.13	49.07	49.26	48.88	48.32	48.62	50.10	30
31	49.07		49.19	49.58		49.06		49.20		48.24	48.75		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
10-14-63	0900	52.70									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 21 02	120 58 34	SW 3 7S 9E	33000	18.50	3- 7-38	APR 12-DATE		1912	1959	47.24	USCGS
								1959		47.31	USCGS
										0.00	USCGS

Station located at bridge on Hills Ferry Road, 300 ft. below the Merced River, 3.5 mi. NE of Newman.
Records furn. by U.S.G.S. Drainage area is 9,990 sq. mi. Flow records are published in the
U.S.G.S. report "Surface Water Records of California".

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	807250	SAN JOAQUIN RIVER AT CROWS LANDING BRIDGE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	39.05	38.53	39.30	38.69	39.10	38.31	38.63	38.54	38.84	38.34	37.73	38.36	1
2	38.90	38.56	39.18	38.72	39.11	38.41	38.80	38.52	38.86	38.25	37.85	38.48	2
3	38.91	38.58	39.05	38.77	39.10	38.40	38.63	38.48	38.78	38.11	37.89	38.43	3
4	38.92	38.63	38.98	38.81	39.08	38.37	38.50	38.70	38.72	38.03	37.88	38.33	4
5	38.96	38.69	38.93	38.86	39.06	38.43	38.44	38.81	38.58	38.08	37.91	38.32	5
6	39.83	38.67	38.89	39.06	39.02	38.38	38.42	38.79	38.53	38.02	37.87	38.33	6
7	41.39	38.57	38.84	39.33	38.96	38.38	38.40	38.90	38.52	37.97	37.95	38.30	7
8	39.75	38.67	38.88	39.60	38.89	38.35	38.42	38.92	38.50	37.97	37.88	38.28	8
9	39.14	38.65	38.93	39.65	38.80	38.39	38.27	38.81	38.63	37.90	37.86	38.16	9
10	39.05	38.56	38.96	39.61	38.76	38.44	38.16	38.81	38.91	37.84	37.82	38.07	10
11	39.03	38.49	38.99	39.52	38.79	38.37	38.02	38.90	39.23	37.88	37.80	38.03	11
12	39.53	38.46	39.03	39.48	38.70	38.46	37.98	38.79	39.33	37.89	37.83	38.08	12
13	40.79	38.51	39.02	39.41	38.69	38.71	38.12	38.74	39.32	37.98	37.89	37.90	13
14	42.01	38.55	39.01	39.44	38.62	38.61	38.12	38.64	39.26	37.81	37.87	37.85	14
15	40.24	38.60	39.01	39.38	38.58	38.76	38.35	38.44	39.07	37.94	37.79	37.98	15
16	40.01	38.60	38.98	39.35	38.65	38.79	38.28	38.38	38.88	37.90	37.94	38.00	16
17	39.94	38.67	38.94	39.29	38.71	38.74	38.29	38.41	38.75	38.14	38.11	37.92	17
18	39.84	38.83	38.92	39.22	38.60	38.75	38.35	38.57	38.65	38.13	38.08	37.84	18
19	39.66	38.91	38.93	39.16	38.60	38.60	38.50	38.59	38.55	38.01	37.99	37.93	19
20	40.59	39.07	38.90	39.15	38.53	38.43	38.68	38.64	38.44	38.05	37.94	37.91	20
21	41.70	39.15	38.86	39.21	38.49	38.29	38.86	38.68	38.44	38.06	37.92	38.12	21
22	40.43	39.19	38.81	39.25	38.52	38.27	38.86	38.65	38.44	38.08	37.92	38.05	22
23	39.83	39.39	38.76	39.34	38.43	38.49	38.72	38.58	38.33	37.86	38.05	38.07	23
24	39.12	39.42	38.76	39.60	38.46	38.69	38.77	38.61	38.24	37.83	38.26	38.93	24
25	38.98	39.40	38.75	39.74	38.46	38.76	38.81	38.70	38.15	37.77	38.26	39.28	25
26	38.88	39.38	38.73	39.61	38.40	38.79	38.72	38.80	38.07	37.72	38.17	39.39	26
27	38.65	39.36	38.72	39.45	38.34	38.81	38.77	38.82	37.98	37.93	38.11	39.41	27
28	38.56	39.34	38.70	39.36	38.30	38.69	38.70	38.89	38.04	37.97	38.15	39.46	28
29	38.55	39.32	38.67	39.24	38.28	38.75	38.74	38.91	38.20	37.85	38.19	39.48	29
30	38.55	39.33	38.68	39.16		38.83	38.65	38.80	38.30	37.79	38.09	39.48	30
31	38.53		38.68	39.10		38.61		38.73		37.86	38.07		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
10-14-63	1450	42.20									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 26 52	121 00 44	NW 8 6S 9E		61.9	4- 7-58		41-DATE	1959	1959	0.00	USED
								1959		0.00	USGS
								1959		3.51	USED

Station located at Crows Landing Road Bridge, 4.3 mi. NE of Crows Landing.

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	807200	SAN JOAQUIN RIVER AT PATTERSON BRIDGE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	32.99	32.33	33.02	32.39	32.74	31.78	32.21	31.46	31.99	32.69	32.08	33.20	1
2	32.81	32.32	32.93	32.40	32.74	31.78	32.48	31.46	32.00	33.17	32.18	33.31	2
3	32.77	32.34	32.79	32.45	32.76	31.61	32.31	31.48	32.02	33.03	32.55	33.23	3
4	32.88	32.36	32.72	32.48	32.72	31.50	32.15	31.83	31.91	32.91	32.46	33.09	4
5	32.86	32.42	32.67	32.49	32.69	31.42	32.03	32.05	31.81	33.01	32.54	33.05	5
6	33.25	32.46	32.63	32.60	32.65	31.41	31.95	32.05	31.62	32.93	32.25	33.16	6
7	34.98	32.38	32.59	32.85	32.60	31.57	31.81	32.18	31.61	32.80	32.28	33.09	7
8	34.14	32.38	32.56	33.16	32.54	31.56	31.72	32.26	31.69	32.74	32.23	33.00	8
9	33.15	32.42	32.61	33.26	32.47	31.64	31.51	32.00	31.94	32.56	32.37	32.85	9
10	33.08	32.35	32.63	33.23	32.41	31.60	31.23	32.01	32.34	32.49	32.33	32.73	10
11	33.16	32.26	32.66	33.17	32.39	31.43	30.99	32.20	32.63	32.48	32.15	32.60	11
12	33.43	32.24	32.68	33.13	32.33	31.81	30.71	31.95	32.63	32.47	32.22	32.68	12
13	34.35	32.23	32.71	33.09	32.28	32.08	31.01	31.84	32.52	32.54	32.16	32.75	13
14	35.81	32.28	32.73	33.10	32.21	31.96	31.03	31.83	32.60	32.40	32.22	32.62	14
15	34.62	32.35	32.72	33.05	32.17	31.95	31.35	31.49	32.36	32.34	32.18	32.58	15
16	33.85	32.37	32.71	33.00	32.16	31.98	31.29	31.34	32.07	32.46	32.34	32.72	16
17	33.76	32.39	32.69	32.97	32.24	31.85	31.18	31.45	31.78	32.73	32.61	32.69	17
18	33.65	32.51	32.66	32.91	32.17	31.78	31.25	31.78	31.71	32.90	32.69	32.57	18
19	33.44	32.65	32.64	32.88	32.14	31.67	31.83	31.79	31.33	32.81	32.55	32.62	19
20	33.88	32.79	32.64	32.88	32.08	31.43	32.10	31.85	31.32	32.79	32.39	32.66	20
21	35.19	32.84	32.60	32.91	31.97	30.97	32.15	31.93	31.40	32.66	32.31	32.75	21
22	34.49	32.89	32.56	32.97	31.96	31.66	32.14	31.93	31.53	32.60	32.48	32.74	22
23	33.75	33.05	32.50	33.03	31.97	32.15	31.86	31.81	30.83	32.28	32.89	31.90	23
24	33.02	33.12	32.49	33.16	31.93	32.33	31.79	31.92	30.77	32.11	33.17	32.54	24
25	32.83	33.10	32.47	33.34	31.98	32.56	32.08	32.02	30.92	32.14	33.13	32.97	25
26	32.75	33.11	32.44	33.28	31.91	32.50	31.97	31.97	31.00	32.18	32.78	33.03	26
27	32.56	33.08	32.43	33.11	31.81	32.46	31.95	31.98	30.90	32.58	32.73	33.09	27
28	32.41	33.05	32.41	33.00	31.70	32.38	31.77	32.01	30.91	32.56	32.80	33.08	28
29	32.35	33.04	32.38	32.89	31.70	32.34	31.63	32.14	31.51	32.44	32.82	33.03	29
30	32.33	33.03	32.36	32.82		32.48	31.48	32.09	31.35	32.06	32.99	33.07	30
31	32.33		32.38	32.76		32.22		32.02		32.21	32.94		31

CREST STAGES

E -- ESTIMATED

NR -- NO RECORD

NF -- NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
10-14-63	1810	36.07									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 29 52	121 04 52	SW15 5S 8E		54.0	6-13-38		APR 38-DATE	1938	1959	0.00	USED
								1959		0.00	USCGS
								1959		3.53	USED

Station located at Patterson-Turlock Highway Bridge, 3.1 mi. NE of Patterson

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	B07080	SAN JOAQUIN RIVER AT GRAYSON

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	24.61	24.09	24.65	24.17	24.35	23.45	23.92	23.46	23.83	23.21	22.89	23.67	1
2	24.41	24.02	24.65	24.17	24.30	23.40	24.12	23.47	23.79	23.25	22.83	23.81	2
3	24.28	24.05	24.65	24.22	24.30	23.34	23.97	23.52	23.88	23.28	23.04	23.84	3
4	24.44	24.06	24.85	24.18	24.28	23.37	23.96	23.77	23.79	23.20	23.02	23.69	4
5	24.82	24.12	24.85	24.20	24.28	23.27	23.72	23.85	23.70	23.32	23.05	23.64	5
6	25.12	24.18	24.85	24.28	24.22	23.25	23.73	23.88	23.64	23.33	22.97	23.74	6
7	25.55	24.11	24.85	24.49	24.17	23.34	23.59	23.91	23.61	23.14	22.92	23.78	7
8	26.42	24.09	24.85	24.72	24.13	23.31	23.54	23.97	23.62	23.17	22.91	23.61	8
9	25.38	24.13	24.85	24.91	24.05	23.35	23.40	23.87	23.88	23.07	23.01	23.44	9
10	25.18	24.08	24.85	24.84	23.97	23.35	23.24	23.75	24.07	22.99	23.02	23.37	10
11	25.30	24.01	24.85	24.79	23.93	23.24	23.18	23.84	24.32	22.96	22.86	23.24	11
12	25.62	23.97	24.71	24.72	23.93	23.40	23.07	23.77	24.37	22.94	22.91	23.31	12
13	26.30	23.97	24.72	24.67	23.88	23.74	23.07	23.63	24.32	22.91	22.87	23.42	13
14	27.43	24.00	24.73	24.65	23.85	23.69	23.07	23.63	24.39	22.89	22.91	23.38	14
15	27.23	24.08	24.68	24.63	23.83	23.59	23.17	23.54	24.32	22.82	22.91	23.25	15
16	27.12	24.12	24.63	24.59	23.77	23.65	23.28	23.37	24.12	22.89	22.94	23.35	16
17	25.87	24.17	24.63	24.56	23.85	23.57	23.26	23.48	23.88	23.07	23.12	23.37	17
18	25.79	24.29	24.62	24.48	23.77	23.52	23.27	23.51	23.80	23.19	23.34	23.31	18
19	25.64	24.43	24.57	24.41	23.72	23.41	23.55	23.65	23.64	23.21	23.25	23.34	19
20	25.72	24.70	24.52	24.40	23.68	23.38	23.80	23.76	23.62	23.19	23.04	23.38	20
21	25.92	24.83	24.48	24.48	23.63	23.15	23.86	23.71	23.69	23.15	23.08	23.40	21
22	27.00	24.83	24.43	24.61	23.57	23.23	23.90	23.75	23.72	23.08	23.02	23.55	22
23	26.29	24.98	24.38	24.68	23.88	23.88	23.81	23.66	23.50	22.95	23.32	23.58	23
24	25.77	25.17	24.37	24.76	23.54	24.06	23.69	23.69	24.27	22.78	23.57	24.06	24
25	25.34	25.15	24.53	24.89	23.55	24.26	23.87	23.81	23.25	22.81	23.55	24.65	25
26	24.86	25.15	24.56	24.88	23.52	24.18	23.84	23.80	23.25	22.88	23.40	24.72	26
27	24.54	25.15	24.61	24.72	23.44	24.11	23.85	23.85	23.20	23.07	23.31	24.85	27
28	24.34	25.15	24.33	24.62	23.37	24.14	23.76	23.88	23.15	23.09	23.34	24.80	28
29	24.23	25.20	24.26	24.51	23.35	24.02	23.59	24.19	23.40	23.05	23.27	24.75	29
30	24.22	25.22	24.18	24.40		24.17	23.51	23.97	23.30	22.82	23.47	24.75	30
31	24.22		24.17	24.40		24.02		23.88		22.83	23.50		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
10-7-63	2350	26.98	5-29-64	0530	24.17						
10-14-63	2400	27.72	7-24-64	1945	22.63						
12-27-63	1100	24.65	9-28-64	1300	24.95						

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 33 47	121 09 06	NW25 4S 7E	23900	45.15	3-8-41	JUL 28-DATE		1960	1959	0.00	USED
								1960		0.00	USCGS
										3.81	USED

Station located at Laird Slough Bridge, 5 mi. above the Tuolumne River. High flows bypassing this station through old channel of San Joaquin River are included in figures shown. Records furnished by City of San Francisco.

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	807070	SAN JOAQUIN RIVER AT WEST STANISLAUS I. D. INTAKE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	19.96	22.07	24.23	22.54	21.02	18.54	19.05	18.73	18.33	18.14	18.46	19.59	1
2	19.82	22.09	24.23	22.50	20.90	18.53	19.22	18.87	18.15	18.22	18.40	19.67	2
3	19.92	22.23	24.20	22.58	20.82	18.42	18.94	19.04	18.07	18.24	18.57	19.56	3
4	20.19	22.26	23.85	22.18	20.74	18.31	18.84	19.23	17.84	18.15	18.47	19.34	4
5	20.65	22.32	23.68	22.26	20.77	17.63	18.82	19.30	17.97	18.38	18.32	19.19	5
6	21.15	22.40	23.66	22.26	20.74	17.30	18.73	19.38	17.67	18.52	18.12	19.27	6
7	21.94	22.37	23.70	22.34	20.72	18.43	18.38	19.23	17.91	18.20	18.31	19.32	7
8	21.98	22.33	23.66	22.43	20.68	18.36	18.33	19.18	18.45	17.78	18.33	19.20	8
9	21.37	22.36	23.65	22.32	20.63	18.30	18.17	19.02	19.02	17.11	18.59	19.07	9
10	21.26	22.36	23.67	21.83	20.49	18.37	18.83	18.86	19.27	16.80	18.59	18.92	10
11	21.57	22.32	23.50	21.68	20.32	18.32	18.47	18.82	19.33	17.44	18.16	18.95	11
12	22.19	22.30	23.44	21.52	20.47	18.58	18.22	18.60	19.37	17.99	18.46	18.96	12
13	22.71	22.35	23.47	21.30	20.45	18.96	18.20	18.33	19.19	17.87	18.36	19.11	13
14	23.31	22.39	23.52	21.26	20.50	18.67	18.20	17.94	19.29	17.36	18.30	19.07	14
15	23.20	22.48	23.31	21.36	20.55	18.87	18.29	17.91	19.08	16.63	18.44	18.86	15
16	22.44	22.56	23.21	21.31	20.43	18.74	18.44	17.56	18.78	17.44	18.74	18.86	16
17	22.38	22.75	23.28	21.27	20.31	18.54	18.48	17.91	18.39	18.33	18.97	18.85	17
18	22.71	22.85	23.28	21.17	20.19	18.67	18.42	18.27	18.20	18.27	18.97	18.87	18
19	22.74	23.01	23.15	21.09	20.23	18.89	18.62	18.51	18.07	18.33	18.96	18.90	19
20	22.93	23.42	23.01	21.02	19.94	18.93	18.99	18.53	17.24	18.29	18.70	19.07	20
21	23.98	23.59	22.97	21.15	19.74	18.77	18.93	18.75	18.27	18.19	18.64	19.03	21
22	24.50	23.51	22.96	21.32	19.56	19.12	18.84	18.75	18.44	18.12	18.62	19.26	22
23	24.24	23.74	22.90	22.08	19.56	19.52	18.66	18.60	17.99	17.99	18.93	19.55	23
24	23.90	23.91	23.02	22.10	19.42	19.57	18.53	18.51	16.63	17.53	19.16	20.00	24
25	23.64	23.90	23.47	21.65	19.16	19.64	18.77	18.77	17.42	18.05	19.13	20.39	25
26	22.79	23.89	23.54	21.45	19.29	19.52	18.92	18.81	17.99	18.34	18.99	20.44	26
27	22.42	23.94	23.59	21.25	19.28	19.39	19.03	18.73	18.15	18.57	18.91	20.55	27
28	22.16	23.98	22.88	21.05	18.04	19.39	18.95	18.71	18.30	18.34	19.04	20.49	28
29	22.11	24.13	22.67	21.06	17.52	19.21	18.70	18.88	18.46	18.05	19.06	20.30	29
30	22.22	24.17	22.48	21.01		19.14	18.66	18.83	18.47	18.06	19.31	20.36	30
31	22.21		22.39	20.98		18.97		18.60		18.25	19.45		31

CREST STAGES

E — ESTIMATED
NR — NO RECORD
NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
10-22-63	1200	24.54									
12-1-63	2400	24.25									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE		
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO	
37 36 07	121 10 51	SE10 4S 7E					DEC 50-DATE	1959	1959	0.00 0.00 3.67
								1959		USED USCGS USED

Station located at intake gates for W.S.I.D. Canal, 2.6 mi. N of Grayson.

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	804175	TUOLUMNE RIVER AT LAGRANGE BRIDGE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	68.38	70.88	72.23	70.89	69.11	67.48	67.33	67.29	67.02	66.94	66.91	67.05	1
2	68.47	70.94	72.18	70.97	68.92	67.45	67.35	67.28	67.02	66.98	67.19	67.04	2
3	68.52	70.91	71.85	70.31	69.01	67.39	67.36	67.30	67.00	66.97	67.18	67.05	3
4	68.52	70.96	71.84	70.62	69.14	67.38	67.29	67.30	67.02	66.95	67.21	67.04	4
5	68.53	70.97	71.86	70.69	69.12	67.37	67.29	67.26	67.02	67.05	67.22	67.06	5
6	67.53	70.96	71.89	70.69	69.16	67.35	67.28	67.28	67.03	67.05	67.22	67.05	6
7	68.45	70.95	71.83	70.60	69.16	67.37	67.28	67.26	66.96	66.96	67.21	67.06	7
8	68.51	70.96	71.84	69.98	69.14	67.34	67.28	67.20	66.99	66.98	67.21	67.07	8
9	68.51	70.97	71.83	69.54	68.70	67.34	67.29	67.11	67.00	67.04	67.21	67.14	9
10	68.52	70.95	71.64	69.55	68.97	67.35	67.34	67.09	66.97	67.04	67.21	67.24	10
11	68.53	70.99	71.67	69.20	69.15	67.34	67.30	67.02	66.93	67.02	67.21	67.07	11
12	68.54	71.02	71.66	69.14	69.18	67.37	67.29	67.02	67.12	67.01	67.21	67.03	12
13	67.50	71.03	71.73	69.38	69.41	67.35	67.29	67.04	67.17	66.95	67.21	67.01	13
14	68.45	71.05	71.45	69.38	69.20	67.35	67.29	67.01	67.09	66.94	67.21	67.00	14
15	68.71	71.15	71.47	69.43	69.15	67.34	67.35	67.03	66.96	66.99	67.21	67.05	15
16	69.63	71.38	71.59	69.26	68.77	67.33	67.31	67.05	66.92	67.12	67.25	67.11	16
17	70.09	71.37	71.50	69.27	69.00	67.34	67.30	67.05	67.30	66.97	67.23	67.09	17
18	70.10	71.53	71.39	69.15	68.91	67.37	67.42	67.04	67.04	66.99	67.23	67.02	18
19	70.57	71.72	71.24	69.12	68.49	67.33	67.31	67.23	66.96	66.88	67.22	67.02	19
20	70.82	71.80	71.25	69.04	68.48	67.34	67.29	67.09	66.97	66.86	67.43	67.00	20
21	71.26	71.67	71.21	69.51	68.50	67.34	67.34	67.04	66.95	66.85	67.20	67.00	21
22	71.29	71.85	71.23	69.40	68.49	67.36	67.33	67.01	66.95	66.91	67.12	67.02	22
23	71.27	71.91	71.45	69.22	68.37	67.34	67.30	67.01	67.00	66.93	67.05	67.10	23
24	71.08	71.90	71.83	69.15	68.51	67.35	67.29	67.01	67.08	67.11	67.04	67.15	24
25	70.48	71.87	71.75	69.12	68.71	67.34	67.29	67.01	67.01	67.15	67.30	67.13	25
26	70.51	71.92	71.76	68.94	68.13	67.42	67.29	67.05	66.94	66.91	67.10	67.05	26
27	70.30	72.01	70.96	69.03	67.54	67.34	67.29	67.05	66.93	66.86	67.04	67.04	27
28	70.55	72.18	70.94	69.16	67.65	67.40	67.29	67.03	66.93	NF	67.03	67.02	28
29	70.60	72.16	70.82	69.16	67.56	67.34	67.29	67.03	66.93	66.89	67.03	67.03	29
30	70.62	72.22	70.71	69.41		67.32	67.30	67.03	66.93	66.95	67.03	66.98	30
31	70.62		71.05	69.15		67.34		67.03		NF	67.02		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
12-8-63	2020	72.31									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 39 59	120 27 40	NW20 3S 14E	48200	88.0	12- 8-50	OCT 36-SEP 60 OCT 61-DATE		1937		0.00	USGS

Station located at highway bridge, immediately N of La Grange. Flow regulated by reservoirs and power plants. In order to machine process this station, the recorder datum was changed. To obtain true elevations add 100 feet to all of the above gage heights.

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	804165	TUOLUMNE RIVER AT ROBERTS FERRY BRIDGE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	8.89	11.58	13.09	11.73	9.95	8.44	8.40	8.46	8.53	8.65	8.69	8.71	1
2	9.61	11.71	13.11	11.77	9.83	8.40	8.38	8.46	8.58	8.65	8.70	8.68	2
3	9.68	11.71	12.72	11.22	9.78	8.35	8.36	8.49	8.57	8.64	8.70	8.68	3
4	9.68	11.73	12.68	11.43	9.91	8.31	8.39	8.51	8.60	8.64	8.70	8.70	4
5	9.68	11.76	12.70	11.32	9.90	8.31	8.39	8.51	8.62	8.67	8.70	8.68	5
6	9.36	11.77	12.72	11.31	9.91	8.32	8.37	8.54	8.62	8.68	8.71	8.70	6
7	9.14	11.76	12.68	11.22	9.92	8.32	8.34	8.52	8.63	8.68	8.75	8.71	7
8	9.64	11.76	12.68	11.02	9.90	8.30	8.34	8.52	8.65	8.67	8.76	8.69	8
9	9.66	11.77	12.68	10.41	9.70	8.29	8.34	8.53	8.67	8.67	8.77	8.68	9
10	9.67	11.76	12.43	10.40	9.68	8.29	8.35	8.51	8.65	8.67	8.75	8.66	10
11	9.73	11.80	12.42	10.26	9.86	8.28	8.36	8.49	8.67	8.65	8.75	8.67	11
12	9.68	11.84	12.44	10.06	9.86	8.33	8.38	8.48	8.69	8.65	8.74	8.67	12
13	9.36	11.86	12.53	10.05	9.97	8.34	8.40	8.45	8.68	8.65	8.72	8.67	13
14	9.15	11.88	12.24	10.24	10.02	8.31	8.40	8.43	8.68	8.67	8.76	8.67	14
15	9.71	11.97	12.25	10.23	9.91	8.31	8.38	8.45	8.69	8.67	8.78	8.64	15
16	10.37	12.23	12.33	10.16	9.66	8.31	8.40	8.46	8.69	8.67	8.79	8.65	16
17	11.03	12.22	12.29	10.12	9.68	8.30	8.40	8.47	8.68	8.66	8.79	8.65	17
18	11.03	12.28	12.16	10.10	9.77	8.30	8.41	8.47	8.69	8.65	8.77	8.67	18
19	11.28	12.56	12.04	9.99	9.41	8.31	8.48	8.46	8.71	8.65	8.77	8.68	19
20	11.60	12.69	12.04	9.95	9.34	8.30	8.43	8.47	8.70	8.69	8.80	8.67	20
21	12.00	12.52	12.06	10.02	9.35	8.30	8.40	8.49	8.70	8.68	8.92	8.65	21
22	12.09	12.73	12.03	10.34	9.34	8.33	8.39	8.52	8.65	8.68	8.82	8.65	22
23	12.09	12.78	12.15	10.15	9.26	8.36	8.40	8.54	8.65	8.67	8.80	8.64	23
24	12.05	12.77	12.59	10.05	9.23	8.35	8.40	8.53	8.66	8.68	8.78	8.64	24
25	11.36	12.74	12.52	9.98	9.46	8.35	8.39	8.54	8.64	8.69	8.75	8.66	25
26	11.37	12.78	12.65	9.92	9.36	8.35	8.38	8.54	8.64	8.70	8.73	8.70	26
27	11.18	12.85	11.75	9.78	8.60	8.38	8.39	8.54	8.65	8.70	8.73	8.69	27
28	11.34	13.05	11.73	9.94	8.48	8.36	8.42	8.53	8.66	8.70	8.73	8.68	28
29	11.42	13.02	11.62	9.97	8.56	8.39	8.39	8.52	8.64	8.69	8.72	8.67	29
30	11.41	13.09	11.52	10.03		8.37	8.41	8.52	8.65	8.70	8.72	8.65	30
31	11.43		11.75	10.09		8.36		8.53		8.69	8.73		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
12-2-63	2030	13.12									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 38 08	120 37 03	NW35 3S 12E	49800	28.2	12- 8-50	JUL 28-OCT 36 JAN 37-FEB 38 JUN 38-DATE		1930 1940	1940	106.20 0.00	USCGS USCGS

Station located at highway bridge, 7.5 mi. E of Waterford. In order to machine process this station, the recorder datum was changed. To obtain true elevations add 100 feet to all of the above gage heights.

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	804150	TUOLUMNE RIVER AT HICKMAN BRIDGE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	71.58	74.66	76.14	74.93	73.21	71.80	71.71	71.63	71.38	71.40	71.52	71.24	1
2	72.37	74.80	76.17	74.98	73.08	71.76	71.70	71.66	71.38	71.42	71.53	71.21	2
3	72.52	74.80	75.86	74.48	72.99	71.73	71.69	71.69	71.43	71.43	71.50	71.21	3
4	72.55	74.79	75.80	74.72	73.21	71.70	71.72	71.68	71.42	71.42	71.43	71.25	4
5	72.59	74.82	75.82	74.57	73.21	71.68	71.71	71.67	71.43	71.44	71.45	71.23	5
6	72.50	74.84	75.86	74.53	73.21	71.69	71.69	71.71	71.43	71.46	71.45	71.24	6
7	71.91	74.81	75.85	74.54	73.22	71.68	71.64	71.72	71.43	71.44	71.49	71.27	7
8	72.52	74.82	75.82	74.47	73.21	71.68	71.63	71.70	71.46	71.45	71.52	71.28	8
9	72.59	74.82	75.83	73.72	73.09	71.66	71.64	71.69	71.55	71.46	71.49	71.25	9
10	72.59	74.80	75.60	73.68	72.83	71.64	71.61	71.67	71.48	71.47	71.44	71.27	10
11	73.04	74.83	75.56	73.58	73.17	71.66	71.62	71.66	71.46	71.46	71.42	71.27	11
12	73.06	74.88	75.60	73.30	73.16	71.66	71.62	71.61	71.47	71.44	71.41	71.29	12
13	72.92	74.89	75.67	73.27	73.28	71.68	71.65	71.59	71.46	71.44	71.42	71.29	13
14	72.10	74.90	75.44	73.54	73.42	71.68	71.64	71.56	71.45	71.43	71.44	71.30	14
15	72.69	75.00	75.40	73.50	73.25	71.66	71.60	71.53	71.46	71.47	71.46	71.29	15
16	73.15	75.19	75.48	73.46	73.04	71.66	71.60	71.54	71.49	71.49	71.50	71.28	16
17	74.01	75.21	75.43	73.39	72.93	71.66	71.61	71.54	71.50	71.47	71.53	71.28	17
18	74.06	75.23	75.34	73.37	73.14	71.64	71.61	71.50	71.50	71.45	71.49	71.28	18
19	74.23	75.57	75.16	73.25	72.75	71.65	71.66	71.48	71.54	71.43	71.45	71.32	19
20	74.66	75.74	75.16	73.22	72.62	71.66	71.66	71.48	71.50	71.48	71.49E	71.33	20
21	74.99	75.58	75.19	73.26	72.60	71.67	71.62	71.50	71.50	71.51	71.49E	71.30	21
22	75.12	75.77	75.15	73.72	72.60	71.69	71.60	71.51	71.47	71.47	71.52E	71.29	22
23	75.07	75.85	75.24	73.49	72.54	71.71	71.62	71.51	71.42	71.46	71.55E	71.30	23
24	75.08	75.87	75.75	73.34	72.48	71.70	71.60	71.53	71.39	71.49	71.58E	71.27	24
25	74.48	75.83	75.71	73.26	72.74	71.69	71.61	71.56	71.41	71.47	71.66E	71.29	25
26	74.50	75.86	75.65	73.20	72.80	71.69	71.59	71.56	71.38	71.50	71.19	71.32	26
27	74.32	75.89	74.97	72.99	72.14	71.71	71.59	71.53	71.37	71.53	71.19	71.34	27
28	74.34	76.10	74.96	73.21	72.18	71.70	71.59	71.53	71.38	71.52	71.23	71.35	28
29	74.53	76.08	74.78	73.24	72.09	71.68	71.58	71.53	71.39	71.49	71.21	71.34	29
30	74.50	76.14	74.69	73.24		71.67	71.60		71.47	71.50	71.21	71.33	30
31	74.51		74.92	73.41		71.66		71.39		71.54	71.24		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
12-2-63	2100	76.18									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 38 10	120 45 14	NW34 3S 11E	5900D	96.2	12- 8-5D	JUL 32-OCT 36 JAN 37-MAR 37 JUL 37-FEB 38 JUL 38-DEC 38 MAR 39-DATE		1932		0.00	USCGS

Station located at Hickman-Waterford Road Bridge, immediately S of Waterford. Flow regulated by reservoirs and power plants. Altitude of gage is approximately 80 feet, USC & GS datum. In August 1964 this station was moved approximately one-quarter mile downstream to a point immediately upstream of the new Hickman-Waterford Road Bridge.

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	804130	DRY CREEK NEAR MODESTO

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	68.40	67.73	67.73	67.64	67.96	67.64	68.38	68.82	68.13	68.13	67.98	68.64	1
2	68.42	67.73	67.73	67.64	67.91	67.67	68.63	68.91	68.21	68.11	68.00	68.57	2
3	68.48	67.73	67.71	67.63	67.84	67.70	68.37	68.94	68.15	67.99	68.07	68.48	3
4	68.55	67.72	67.71	67.64	67.81	67.69	67.99	69.05	68.13	67.90	67.94	68.50	4
5	68.76	67.74	67.71	67.64	67.77	67.78	67.94	68.89	68.10	67.90	67.93	68.28	5
6	68.81	67.78	67.70	67.64	67.74	68.05	67.88	69.01	68.25	68.05	67.93	68.32	6
7	68.72	67.77	67.71	67.64	67.72	68.46	67.89	68.93	68.19	67.98	67.87	68.31	7
8	68.63	67.76	67.71	67.65	67.71	68.45	67.95	68.50	68.21	67.81	67.91	68.39	8
9	68.64	67.77	67.70	67.63	67.73	68.62	68.21	68.27	68.33	67.85	68.07	68.46	9
10	68.79	67.76	67.70	67.64	67.70	68.61	68.18	68.15	68.57	67.86	68.17	68.47	10
11	69.30	67.75	67.70	67.62	67.67	68.45	68.23	68.17	68.26	68.00	68.06	68.52	11
12	70.89	67.74	67.70	67.64	67.64	68.43	68.32	68.15	68.06	67.96	68.00	68.48	12
13	69.56	67.74	67.70	67.64	67.66	68.34	68.30	68.19	68.15	67.93	67.92	68.32	13
14	68.76	67.80	67.70	67.66	67.66	68.12	68.27	68.33	68.13	67.89	67.99	68.42	14
15	68.47	67.96	67.70	67.64	67.69	67.96	68.52	68.21	68.15	67.89	68.00	68.32	15
16	68.39	67.97	67.69	67.64	67.69	67.76	68.55	68.04	68.30	67.82	67.93	68.41	16
17	68.35	67.97	67.68	67.65	67.70	67.91	68.39	67.98	68.31	67.95	68.12	68.35	17
18	68.19	67.95	67.68	67.65	67.72	67.90	68.51	68.07	68.35	67.94	68.18	68.33	18
19	68.08	67.96	67.68	67.64	67.71	67.89	68.54	68.09	68.35	67.92	68.07	68.44	19
20	67.96	68.07	67.68	67.73	67.69	67.95	68.76	68.12	68.48	68.03	68.16	68.39	20
21	67.88	68.28	67.66	67.97	67.68	68.11	68.64	68.14	68.40	67.95	68.28	68.35	21
22	67.82	68.22	67.66	70.15	67.71	68.45	68.70	68.12	68.30	68.10	68.17	68.41	22
23	67.79	68.00	67.66	74.11	67.69	69.06	68.73	68.16	68.15	67.94	68.21	68.36	23
24	67.79	68.01	67.66	70.57	67.68	68.53	68.79	68.22	68.11	67.94	68.22	68.44	24
25	67.79	68.15	67.67	69.43	67.66	68.21	68.82	68.19	68.15	67.97	68.04	68.45	25
26	67.75	67.97	67.67	68.84	67.64	67.97	68.87	68.17	68.07	67.94	67.97	68.44	26
27	67.71	67.86	67.66	68.51	67.60	67.86	68.99	68.15	68.03	67.96	68.10	68.39	27
28	67.72	67.78	67.66	68.32	67.59	67.83	68.72	68.23	67.93	68.09	68.17	68.53	28
29	67.73	67.75	67.65	68.18	67.67	67.82	68.48	68.21	68.02	68.05	68.17	68.65	29
30	67.74	67.74	67.66	68.10		67.75	68.49	68.22	68.06	68.11	68.31	68.67	30
31	67.74		67.66	68.04		67.83		68.20		68.04	68.48		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
1-23-64	0700	75.53									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 39 26	120 55 19	SE24 3S 9E	7710	88.04	12-23-55	MAR 41-DATE		1941		0.00	USCGS

Station located 0.1 mi. below Claus Road bridge, 4 mi. E. of Modesto. Tributary to Tuolumne River. Prior to Mar. 1941, records available for a site 2.5 mi. downstream. Station is operated under a cooperative agreement between the Department of Water Resources and the Modesto Irrigation District.

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	804120	TUOLUMNE RIVER AT MODESTO

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	41.32	42.56	43.97	42.73	41.95	41.32	41.34	41.26	41.20	41.20	41.13	41.25	1
2	41.44	42.65	43.99	42.70	41.91	41.28	41.33	41.26	41.20	41.20	41.12	41.23	2
3	41.59	42.68	43.84	42.67	41.84	41.26	41.28	41.31	41.20	41.17	41.14	41.20	3
4	41.64	42.67	43.52	42.50	41.88	41.25	41.27	41.34	41.20	41.19	41.11	41.21	4
5	41.68	42.71	43.48	42.56	41.91	41.23	41.27	41.31	41.20	41.21	41.12	41.20	5
6	41.71	42.71	43.52	42.53	41.91	41.26	41.26	41.34	41.23	41.21	41.12	41.18	6
7	41.54	42.71	43.55	42.54	41.91	41.28	41.22	41.32	41.25	41.19	41.13	41.19	7
8	41.52	42.70	43.50	42.50	41.91	41.29	41.24	41.28	41.25	41.14	41.15	41.20	8
9	41.66	42.71	43.51	42.26	41.91	41.30	41.25	41.23	41.30	41.15	41.16	41.21	9
10	41.67	42.71	43.42	42.12	41.76	41.30	41.23	41.22	41.28	41.15	41.16	41.24	10
11	41.85	42.71	43.24	42.08	41.86	41.29	41.23	41.22	41.24	41.18	41.16	41.27	11
12	42.07	42.73	43.26	41.96	41.90	41.36	41.25	41.20	41.20	41.16	41.13	41.27	12
13	41.97	42.76	43.25	41.92	41.92	41.32	41.26	41.19	41.21	41.15	41.11	41.24	13
14	41.72	42.78	43.26	42.00	42.00	41.28	41.26	41.20	41.21	41.15	41.13	41.25	14
15	41.66	42.84	43.04	42.00	41.95	41.28	41.27	41.20	41.22	41.14	41.14	41.25	15
16	41.80	42.92	43.06	42.02	41.90	41.27	41.27	41.19	41.24	41.14	41.14	41.22	16
17	42.07	43.05	43.17	41.97	41.79	41.25	41.25	41.17	41.26	41.15	41.16	41.20	17
18	42.24	43.05	43.09	41.96	41.87	41.24	41.25	41.18	41.26	41.16	41.17	41.20	18
19	42.25	43.20	42.96	41.92	41.81	41.26	41.26	41.16	41.26	41.17	41.15	41.21	19
20	42.49	43.47	42.91	41.90	41.67	41.25	41.30	41.17	41.27	41.18	41.15	41.23	20
21	42.60	43.40	42.92	41.93	41.66	41.27	41.27	41.19	41.27	41.16	41.18	41.21	21
22	42.82	43.42	42.90	42.17	41.65	41.33	41.26	41.19	41.25	41.20	41.20	41.22	22
23	42.86	43.60	42.89	42.63	41.63	41.39	41.26	41.20	41.22	41.19	41.19	41.23	23
24	42.87	43.63	43.21	42.21	41.58	41.36	41.28	41.21	41.22	41.16	41.18	41.23	24
25	42.73	43.60	43.44	42.05	41.61	41.32	41.27	41.22	41.20	41.17	41.15	41.23	25
26	42.49	43.59	43.49	41.98	41.70	41.29	41.28	41.19	41.19	41.19	41.14	41.25	26
27	42.48	43.62	43.16	41.89	41.57	41.28	41.30	41.19	41.20	41.18	41.17	41.24	27
28	42.37	43.76	42.77	41.91	41.33	41.27	41.26	41.22	41.21	41.20	41.17	41.31	28
29	42.47	43.89	42.70	41.94	41.28	41.25	41.24	41.20	41.22	NR	41.17	41.34	29
30	42.53	43.94	42.65	41.94		41.25	41.23	41.20	41.20	NR	41.17	41.34	30
31	42.53		42.65	42.02		41.27		41.21		NR	41.22		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
12-2-63	2400	44.02									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 37 38	120 59 20	SW33 3S 9E	57000	69.19	12- 9-50	JAN 95-DEC 96 MAR 40-DATE	78- 84 91- 94	1940		0.00	USCGS

Station located at U.S. Highway 99 Bridge. Records furn. by U.S.G.S.
Flow records are published by the U.S.G.S. report "Surface Water Records
of California."

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	804105	TUOLUMNE RIVER AT TUOLUMNE CITY

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	24.09	27.53	29.79	28.00	25.66	23.98	23.73	23.56	23.37	23.32	23.11	23.51	1
2	24.11	27.72	29.80	27.94	25.50	23.93	23.83	23.60	23.30	23.30	23.13	23.47	2
3	24.54	27.86	29.82	28.00	25.36	23.88	23.76	23.63	23.34	23.31	23.10	23.38	3
4	24.76	27.89	29.40	27.39	25.30	23.86	23.71	23.69	23.31	23.30	23.06	23.33	4
5	24.85	27.92	29.32	27.56	25.46	23.81	23.72	23.68	23.33	23.29	23.08	23.39	5
6	24.99	27.95	29.36	27.46	25.46	23.79	23.73	23.71	23.30	23.29	23.02	23.37	6
7	24.85	27.96	29.40	27.56	25.46	23.85	23.67	23.71	23.41	23.30	23.00	23.32	7
8	24.43	27.93	29.35	27.40	25.47	23.87	23.84	23.66	23.45	23.25	23.07	23.27	8
9	24.82	27.94	29.34	27.01	25.42	23.86	23.59	23.56	23.54	23.14	23.15	23.30	9
10	24.95	27.95	29.31	26.38	25.24	23.88	23.55	23.49	23.51	23.15	23.12	23.35	10
11	25.34	27.94	29.05	26.24	25.17	23.85	23.52	23.46	23.48	23.16	23.11	23.38	11
12	25.94	27.96	29.00	26.00	25.40	23.94	23.55	23.44	23.38	23.16	23.12	23.37	12
13	26.02	28.01	29.00	25.79	25.42	23.94	23.53	23.41	23.36	23.13	23.11	23.42	13
14	25.68	28.05	29.07	25.82	25.58	23.80	23.52	23.34	23.40	23.13	23.14	23.35	14
15	25.13	28.15	28.76	25.94	25.60	23.81	23.51	23.35	23.38	23.07	23.22	23.42	15
16	25.37	28.23	28.70	25.93	25.47	23.73	23.52	23.38	23.42	23.02	23.28	23.48	16
17	25.82	28.47	28.82	25.86	25.20	23.68	23.51	23.40	23.44	23.02	23.17	23.44	17
18	26.60	28.51	28.72	25.79	25.20	23.88	23.50	23.40	23.43	23.05	23.13	23.48	18
19	26.70	28.67	28.60	25.72	25.28	23.89	23.51	23.39	23.42	23.13	23.13	23.38	19
20	27.10	29.12	28.43	25.63	24.80	23.69	23.54	23.36	23.42	23.14	23.12	23.43	20
21	27.62	29.23	28.41	25.74	24.79	23.67	23.59	23.34	23.44	23.12	23.17	23.38	21
22	28.20	29.07	28.41	26.00	24.76	23.78	23.58	23.31	23.41	23.09	23.25	23.33	22
23	28.39	29.35	28.38	27.16	24.74	23.89	23.58	23.34	23.37	23.17	23.27	23.34	23
24	28.40	29.42	28.62	26.75	24.64	23.89	23.58	23.35	23.28	23.11	23.24	23.31	24
25	28.30	29.40	29.14	26.02	24.61	23.82	23.53	23.35	23.27	23.09	23.20	23.35	25
26	27.53	29.37	29.17	25.78	24.81	23.78	23.52	23.30	23.27	23.12	23.17	23.37	26
27	27.43	29.41	29.14	25.58	24.76	23.75	23.62	23.28	23.30	23.10	23.18	23.38	27
28	27.19	29.47	28.22	25.42	24.21	23.73	23.59	23.30	23.30	23.04	23.23	23.35	28
29	27.32	29.70	28.06	25.55	23.99	23.72	23.55	23.31	23.29	22.98	23.20	23.48	29
30	27.47	29.72	27.86	25.57		23.69	23.52	23.38	23.34	23.02	23.24	23.63	30
31	27.49		27.75	25.62		23.64		23.38		23.06	23.38		31

CREST STAGES

	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
E — ESTIMATED	10-24-63	1700	28.60	1-23-64	1800	27.64	7-30-64	1400	22.99			
NR — NO RECORD	12- 1-63	0800	29.86	2-27-64	0700	24.90						
NF — NO FLOW	12-27-63	0300	28.50	5- 7-64	0600	23.76						

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 36 12	121 07 50	NW 7 4S 8E		46.65	12- 9-50	30-DATE		1960	1959	0.00	USED
								1960		0.00	USCGS
								1960		3.50	USED

Station located at highway bridge, 3.35 mi. above mouth. Backwater at times, from the San Joaquin River, affects the stage-discharge relationship. Records furnished by City of San Francisco.

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	B07040	SAN JOAQUIN RIVER AT MAZE ROAD BRIDGE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	15.20	17.36	19.14	17.88	16.56	14.00	14.42	13.91	13.93	13.47	12.97	14.36	1
2	15.11	17.31	19.17	17.89	16.45	14.00	14.53	14.04	13.77	13.47	13.02	14.33	2
3	15.18	17.42	19.16	17.93	16.38	13.87	14.44	14.11	13.77	13.51	13.08	14.28	3
4	15.44	17.45	18.93	17.70	16.29	13.79	14.20	14.25	13.65	13.52	13.14	14.12	4
5	15.76	17.50	18.74	17.65	16.36	13.68	14.19	14.32	13.62	13.53	13.02	13.98	5
6	16.28	17.58	18.68	17.65	16.37	13.66	14.11	14.46	13.55	13.62	12.97	14.06	6
7	16.82	17.58	18.68	17.72	16.34	13.84	13.92	14.35	13.60	13.44	12.88	14.13	7
8	17.15	17.54	18.66	17.80	16.29	13.86	13.92	14.27	13.75	13.30	12.90	14.01	8
9	16.67	17.56	18.66	17.81	16.06	13.88	13.87	14.11	14.16	13.22	13.01	13.92	9
10	16.48	17.56	18.69	17.49	15.88	13.90	13.70	13.99	14.40	13.16	13.14	13.80	10
11	16.72	17.53	18.53	17.16	15.66	13.86	13.67	13.94	14.42	13.14	12.97	13.79	11
12	17.44	17.53	18.44	17.02	15.75	13.97	13.77	13.81	14.43	13.14	12.99	13.83	12
13	17.96	17.54	18.45	16.80	15.75	14.22	13.71	13.69	14.26	13.18	13.03	13.92	13
14	18.42	17.59	18.48	16.72	15.76	14.18	13.65	13.61	14.22	13.03	12.96	13.96	14
15	18.54	17.66	18.38	16.80	15.83	14.09	13.64	13.55	14.20	12.89	13.10	13.80	15
16	17.98	17.72	18.24	16.77	15.72	14.06	13.74	13.53	13.99	12.73	13.24	13.75	16
17	17.77	17.86	18.27	16.72	15.61	13.94	13.75	13.57	13.82	12.97	13.50	13.74	17
18	18.02	17.96	18.27	16.48	15.45	13.96	13.74	13.63	13.67	13.10	13.57	13.80	18
19	18.07	18.10	18.17	16.39	15.48	14.06	13.81	13.80	13.60	13.25	13.59	13.77	19
20	18.02	18.44	18.06	16.32	15.24	14.11	14.08	13.83	13.49	13.26	13.43	13.92	20
21	18.65	18.63	18.16	16.45	15.00	13.98	14.06	13.93	13.52	13.22	13.31	13.95	21
22	19.18	18.58	18.24	16.66	14.90	14.16	14.04	13.91	13.61	13.17	13.38	14.12	22
23	19.07	18.73	18.23	17.44	14.86	14.64	14.04	13.85	13.48	13.20	13.59	14.33	23
24	18.88	18.90	18.28	17.73	14.76	14.77	13.96	13.78	13.30	13.03	13.79	14.66	24
25	18.65	18.91	18.66	17.24	14.63	14.80	14.00	13.96	13.31	12.97	13.79	15.04	25
26	18.09	18.89	18.79	16.97	14.66	14.73	14.13	13.98	13.27	13.12	13.70	15.09	26
27	17.70	18.92	18.88	16.76	14.66	14.63	14.19	13.97	13.32	13.15	13.62	15.25	27
28	17.49	18.93	18.33	16.56	14.33	14.54	14.14	13.89	13.49	13.14	13.74	15.31	28
29	17.34	19.06	18.07	16.55	13.97	14.46	13.98	13.98	13.52	12.95	13.75	15.10	29
30	17.44	19.12	17.91	16.51		14.46	13.90	14.06	13.56	12.81	13.91	15.13	30
31	17.45		17.80	16.52		14.33		13.96		12.75	14.13		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
10-22-63	1950	19.25									
12- 3-63	1400	19.18									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 38 28	121 13 37	SW29 3S 7E		39.8	12-9-50	JAN 50-MAR 52	SEP 43-DEC 49 APR 52-DATE	1943 1959 1959	1959	0.00 0.00 3.41	USED USCGS USED

Station located at State Highway 132 Bridge, 13 mi. W of Modesto.

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	B03175	STANISLAUS RIVER AT ORANGE BLOSSOM BRIDGE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	1.85	2.01	2.07	3.60	3.67	1.81	2.15	1.44	1.26	1.24	1.25	1.51	1
2	1.85	2.00	2.29	3.61	3.67	1.75	2.11	1.43	1.25	1.21	1.27	1.47	2
3	1.84	1.99	2.10	3.63	3.66	1.74	1.97	1.46	1.27	1.20	1.30	1.48	3
4	1.85	2.00	2.11	3.64	3.67	1.75	1.95	1.46	1.23	1.22	1.31	1.40	4
5	1.86	2.03	2.11	3.64	3.68	1.76	1.94	1.40	1.19	1.34	1.36	1.44	5
6	1.84	2.04	2.11	3.67	3.67	1.79	1.95	1.47	1.20	1.29	1.39	1.37	6
7	1.84	2.07	2.10	3.66	3.18	1.82	1.99	1.46	1.27	1.23	1.48	1.32	7
8	1.87	2.08	2.11	3.66	2.18	1.81	2.05	1.34	1.29	1.23	1.37	1.32	8
9	1.86	2.05	2.13	3.66	2.16	1.81	1.98	1.34	1.34	1.20	1.35	1.33	9
10	1.85	2.06	2.11	3.65	2.11	1.82	1.78	1.32	1.28	1.20	1.34	1.36	10
11	2.03	2.04	2.08	3.64	2.09	1.82	1.75	1.27	1.22	1.24	1.38	1.37	11
12	3.30	2.05	2.05	3.64	2.13	1.80	1.80	1.34	1.21	1.28	1.40	1.36	12
13	3.17	2.05	2.09	3.63	2.09	1.79	1.82	1.27	1.22	1.22	1.42	1.40	13
14	3.09	2.06	2.10	3.61	1.99	1.77	1.69	1.29	1.29	1.20	1.47	1.36	14
15	3.13	2.07	2.03	3.62	1.87	1.77	1.51	1.30	1.26	1.24	1.44	1.35	15
16	3.11	2.12	2.06	3.33	1.84	1.78	1.52	1.26	1.25	1.34	1.41	1.48	16
17	3.12	2.05	2.09	2.60	1.82	1.79	1.44	1.28	1.24	1.27	1.42	1.36	17
18	2.13	2.11	2.03	3.02	1.81	1.79	1.50	1.23	1.26	1.27	1.47	1.34	18
19	1.84	2.06	2.99	3.01	1.81	1.79	1.50	1.21	1.31	1.24	1.40	1.34	19
20	1.92	2.22	3.51	3.01	1.80	1.79	1.45	1.22	1.29	1.28	1.39	1.37	20
21	1.96	2.09	3.51	3.53	1.80	1.80	1.46	1.26	1.30	1.24	1.39	1.37	21
22	2.01	2.17	3.52	4.46	1.79	1.81	1.50	1.26	1.30	1.23	1.41	1.40	22
23	2.04	2.14	3.53	3.78	1.80	1.79	1.45	1.28	1.32	1.25	1.46	1.43	23
24	2.03	2.18	3.54	3.73	1.80	1.78	1.48	1.25	1.35	1.22	1.47	1.36	24
25	2.01	2.12	3.54	3.71	1.79	1.78	1.49	1.21	1.29	1.27	1.44	1.32	25
26	2.04	2.11	3.55	3.69	1.79	1.78	1.45	1.24	1.25	1.26	1.38	1.38	26
27	2.04	2.05	3.54	3.68	1.77	1.79	1.47	1.35	1.23	1.33	1.43	1.39	27
28	1.98	2.08	3.50	3.67	1.79	1.79	1.53	1.31	1.26	1.30	1.42	1.40	28
29	1.98	2.09	3.58	3.67	1.79	1.81	1.50	1.26	1.22	1.29	1.48	1.43	29
30	2.02	2.09	3.60	3.66		1.81	1.44	1.23	1.26	1.29	1.42	1.38	30
31	2.01		3.50	3.67		1.87		1.23		1.26	1.45		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
1-22-64	0650	5.28									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 47 18	120 45 41	SW 4 2S 11E	52000	30.05	11-21-50	JUN 28-DEC 39 APR 40-DATE				0.00	LOCAL

Station located at bridge, 5.0 mi. E of Oakdale. Flow regulated by reservoirs and power plants.

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	803145	STANISLAUS RIVER AT RIVERBANK

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	73.43	73.56	73.65	75.94	76.07	73.00	73.50	72.75	72.54	72.43	72.50	72.72	1
2	73.41	73.58	73.68	76.05	76.06	72.99	73.30	72.74	72.57	72.39	72.44	72.70	2
3	73.38	73.55	74.18	76.05	76.06	72.93	73.01	72.74	72.51	72.41	72.49	72.67	3
4	73.41	73.53	73.73	76.04	76.05	72.92	72.93	72.74	72.50	72.41	72.41	72.70	4
5	73.44	73.58	73.74	76.02	76.06	72.97	72.92	72.74	72.47	72.46	72.43	72.66	5
6	73.39	73.62	73.74	76.02	76.05	73.03	72.91	72.76	72.43	72.48	72.44	72.69	6
7	73.43	73.60	73.70	76.03	76.00	73.11	72.94	72.76	72.47	72.46	72.44	72.66	7
8	73.42	73.67	73.71	76.03	74.37	73.10	72.97	72.72	72.52	72.50	72.53	72.59	8
9	73.45	73.65	73.76	76.03	73.78	73.05	72.99	72.62	72.59	72.45	72.50	72.62	9
10	73.47	73.64	73.84	76.04	73.70	73.08	72.95	72.59	72.59	72.42	72.51	72.57	10
11	73.84	73.64	73.76	76.02	73.59	73.14	72.83	72.57	72.51	72.42	72.49	72.59	11
12	73.25	73.61	73.68	76.02	73.60	73.32	72.83	72.57	72.49	72.49	72.55	72.61	12
13	75.94	73.60	73.64	76.03	73.63	73.00	72.89	72.57	72.47	72.48	72.61	72.63	13
14	75.81	73.61	73.73	76.02	73.45	72.94	72.83	72.56	72.51	72.49	72.63	72.69	14
15	75.80	73.67	73.68	76.02	73.31	72.95	72.70	72.54	72.53	72.46	72.61	72.66	15
16	75.85	73.68	73.56	75.99	73.13	73.03	72.64	72.54	72.54	72.47	72.60	72.63	16
17	75.84	73.72	73.67	74.83	73.09	72.96	72.64	72.57	72.52	72.49	72.63	72.69	17
18	75.23	73.64	73.66	75.11	73.08	72.98	72.65	72.53	72.51	72.48	72.62	72.68	18
19	73.65	73.72	74.09	75.23	73.08	72.95	72.65	72.51	72.50	72.45	72.63	72.64	19
20	73.44	73.90	75.98	75.22	73.07	72.99	72.65	72.50	72.45	72.53	72.55	72.64	20
21	73.52	74.04	76.07	75.51	73.06	72.99	72.65	72.49	72.48	72.54	72.55	72.67	21
22	73.59	73.81	76.07	76.85	73.05	73.07	72.64	72.50	72.50	72.43	72.58	72.71	22
23	73.69	73.83	76.07	76.41	73.04	73.29	72.66	72.60	72.41	72.45	72.65	72.75	23
24	73.66	73.90	76.07	76.18	73.00	73.03	72.64	72.58	72.47	72.45	72.65	72.73	24
25	73.61	73.83	76.05	76.14	72.99	73.00	72.63	72.52	72.50	72.41	72.63	72.69	25
26	73.65	73.75	76.04	76.10	72.96	72.97	72.71	72.50	72.39	72.51	72.60	72.70	26
27	73.65	73.71	76.06	76.09	72.96	72.94	72.76	72.53	72.33	72.48	72.57	72.68	27
28	73.58	73.60	75.94	76.08	72.96	72.96	72.77	72.55	72.45	72.46	72.65	72.71	28
29	73.47	73.67	76.04	76.07	72.99	73.02	72.83	72.49	72.42	72.50	72.67	72.73	29
30	73.56	73.67	76.04	76.07		73.07	72.77	72.51	72.40	72.48	72.68	72.72	30
31	73.57		76.02	76.07		73.06		72.53		72.47	72.62		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
1-22-64	1500	77.47									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 44 31	120 56 21	SW24 2S 9E	85800	103.18	12-23-55	JUL 40-DATE		1940		0.00	USCGS

Station located at Burneyville Bridge, immediately N of Riverbank.

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	803125	STANISLAUS RIVER AT RIPON

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	38.43	38.28	38.38	NR	41.59	37.62	38.05	37.13	37.04	36.73	36.66	37.36	1
2	38.44	38.27	38.32	NR	41.58	37.63	38.42	37.09	36.94	36.76	36.72	37.28	2
3	38.67	38.27	38.59	NR	41.57	37.57	37.95	37.18	36.90	36.74	36.67	37.36	3
4	38.43	38.25	NR	NR	41.57	37.54	37.79	37.39	36.86	36.84	36.76	37.16	4
5	38.32	38.27	NR	NR	41.58	37.52	37.80	37.35	36.91	36.95	36.67	37.06	5
6	38.24	38.35	NR	NR	41.57	37.59	37.70	37.49	36.86	36.84	36.62	37.07	6
7	38.37	38.34	NR	NR	41.56	37.63	37.55	37.40	36.88	36.88	36.74	37.13	7
8	38.40	38.34	NR	NR	40.72	37.75	37.58	37.33	37.06	36.90	36.80	37.07	8
9	38.38	38.38	NR	41.48	39.18	37.76	37.60	37.26	37.37	36.91	36.87	36.98	9
10	38.52	38.34	NR	41.48	38.80	37.64	37.57	37.15	37.39	36.92	36.78	36.96	10
11	39.04	38.34	NR	41.48	38.60	37.67	37.53	37.12	37.44	36.84	36.78	36.94	11
12	39.64	38.33	NR	41.47	38.48	37.80	37.45	37.10	37.19	36.83	36.87	37.01	12
13	40.77	38.30	NR	41.47	38.46	37.75	37.44	37.08	37.01	36.86	36.70	36.94	13
14	40.87	38.30	NR	41.46	38.41	37.54	37.50	37.00	37.04	36.88	36.71	37.03	14
15	41.00	38.34	NR	41.43	38.24	37.49	37.43	36.96	37.00	36.90	36.81	37.06	15
16	40.96	38.35	NP	41.44	38.08	37.48	37.36	36.99	36.97	36.81	36.89	37.21	16
17	40.99	38.38	NP	40.90	37.94	37.56	37.25	37.06	37.00	36.81	36.91	36.96	17
18	40.85	38.35	NR	39.92	37.89	38.05	37.31	37.09	36.92	36.76	36.83	37.01	18
19	39.60	38.38	NP	40.32	37.87	37.76	37.28	37.10	36.92	36.70	36.83	37.01	19
20	38.68	38.49	NP	40.33	37.82	37.61	37.30	36.98	36.97	36.70	36.82	36.98	20
21	38.46	38.79	NP	40.47	37.79	37.58	37.26	37.02	36.91	36.76	36.78	37.01	21
22	38.39	38.65	NR	41.72	37.76	37.83	37.21	37.00	36.92	36.77	36.82	37.06	22
23	38.40	38.56	NR	42.74	37.72	38.29	37.23	37.02	36.89	36.70	36.99	37.07	23
24	38.41	38.66	NP	41.92	37.71	37.82	37.17	37.03	36.85	36.72	36.89	37.12	24
25	38.38	38.66	NR	41.73	37.68	37.60	37.15	37.10	36.86	36.78	36.82	37.07	25
26	38.36	38.52	NR	41.67	37.66	37.58	37.10	37.04	36.82	36.76	36.82	36.96	26
27	38.38	38.44	NR	41.63	37.64	37.58	37.27	36.98	36.79	36.79	36.77	37.09	27
28	38.38	38.35	NR	41.62	37.62	37.53	37.17	37.07	36.88	36.69	36.74	37.09	28
29	38.30	38.31	NR	41.61	37.61	37.57	37.23	37.06	36.95	36.65	36.85	37.02	29
30	38.25	38.33	NR	41.61		37.64	37.19	37.04	36.91	36.66	36.98	37.09	30
31	38.30		NR	41.61		37.65		37.01		36.75	37.05		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
1-23-64	0300	43.24									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 43 50	121 06 35	SE29 2S 8E	62500	63.25	12-24-55	APR 40-DATE		1940		0.00	USGS

Station located 15 ft. below the Southern Pacific Railroad Bridge, 1.0 mi. SE of Ripon. Records
furn. by U.S.G.S. Flow records are published in U.S.G.S. report "Surface Water Records of California."

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	B03115	STANISLAUS RIVER AT KOETITZ RANCH

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	28.80	28.55	28.61	31.73	32.10	27.81	28.37	27.45	27.32	26.72	26.88	27.63	1
2	28.83	28.52	28.56	31.78	32.09	27.82	28.79	27.35	27.21	26.75	26.95	27.63	2
3	29.08	28.51	28.67	31.85	32.08	27.77	28.46	27.44	27.35	26.86	26.70	27.69	3
4	28.95	28.51	28.92	31.88	32.07	27.66	28.07	27.66	27.18	27.03	26.84	27.62	4
5	28.79	28.52	28.68	31.89	32.08	27.54	28.15	27.68	27.21	27.24	27.01	27.41	5
6	28.69	28.58	28.63	31.90	32.08	27.57	28.05	27.89	27.14	27.10	26.93	27.33	6
7	28.83	28.57	28.61	31.89	32.07	27.67	27.77	27.65	27.22	27.10	26.79	27.31	7
8	28.85	28.56	28.60	31.90	31.65	27.85	27.69	27.75	27.33	27.28	26.82	27.25	8
9	28.74	28.60	28.61	31.91	30.05	27.94	27.79	27.58	27.84	27.18	27.06	27.22	9
10	28.79	28.58	28.65	31.91	29.46	27.81	27.93	27.52	27.72	27.04	27.44	27.27	10
11	29.62	28.56	28.69	31.91	29.18	27.83	27.89	27.32	27.88	26.83	27.41	27.18	11
12	30.25	28.55	28.63	31.91	28.99	28.00	27.92	27.26	27.67	26.95	27.37	27.05	12
13	31.20	28.53	28.57	31.91	28.92	28.04	27.83	27.32	27.40	27.03	27.16	27.01	13
14	31.56	28.54	28.53	31.92	28.87	27.78	27.81	27.23	27.29	27.06	27.10	27.12	14
15	31.65	28.57	28.59	31.90	28.68	27.70	27.79	27.27	27.26	27.12	27.02	27.27	15
16	31.60	28.56	28.54	31.89	28.49	27.66	27.65	27.05	27.24	27.05	27.23	27.32	16
17	31.44	28.59	28.46	31.63	28.34	27.67	27.48	27.08	27.27	27.03	27.06	27.27	17
18	31.30	28.59	28.51	30.46	28.23	28.26	27.68	27.35	27.21	26.91	27.09	27.36	18
19	30.34	28.57	28.50	30.73	28.13	28.19	27.69	27.24	27.11	26.98	27.24	27.37	19
20	29.21	28.71	29.28	30.79	28.07	27.99	27.67	27.17	27.19	26.96	27.08	27.33	20
21	28.84	28.94	31.00	30.88	28.03	28.19	27.58	27.21	27.30	27.01	27.14	27.53	21
22	28.70	28.96	31.41	31.52	28.00	28.12	27.52	27.16	27.21	27.00	27.19	27.59	22
23	28.70	28.82	31.56	32.88	27.95	28.71	27.51	27.16	27.14	26.88	27.37	27.55	23
24	28.70	28.89	31.65	32.46	27.92	28.32	27.40	27.26	26.93	26.93	27.38	27.50	24
25	28.66	28.95	31.66	32.21	27.90	28.14	27.41	27.36	26.93	26.92	27.12	27.46	25
26	28.63	28.80	31.66	32.13	27.83	28.06	27.50	27.27	26.98	27.00	27.13	27.58	26
27	28.66	28.68	31.70	32.10	27.76	28.05	27.65	27.32	26.90	26.96	26.96	27.62	27
28	28.66	28.60	31.74	32.08	27.81	27.95	27.58	27.25	26.89	26.80	26.94	27.55	28
29	28.57	28.53	31.67	32.09	27.78	28.03	27.42	27.22	26.93	26.78	27.11	27.26	29
30	28.52	28.56	31.78	32.09		28.01	27.40	27.34	27.05	26.73	27.28	27.30	30
31	28.56		31.81	32.09		28.01		27.38		26.88	27.39		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
1-23-64	1440	33.09									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B. & M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 41 57	121 10 08	SW 2 3S 7E				OCT 62-DATE	MAR 50-SEP 62	1950 1951 1951	1951	0.00 0.00 3.60	USED USCGS USED

Station located 0.6 mi. NW of Bacon and Gates Road Junction, 3.7 mi. SW of Ripon.

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	803105	STANISLAUS RIVER NEAR MOUTH

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	16.31	16.73	17.69	19.12	19.17	15.78	16.13	14.83	14.68	13.89	13.97	15.03	1
2	16.31	16.69	17.73	19.11	19.14	15.62	16.36	14.70	14.44	13.92	14.15	15.12	2
3	16.51	16.72	17.74	19.20	19.15	15.66	16.18	14.89	14.50	13.96	14.01	15.24	3
4	16.57	16.73	17.76	19.17	19.14	15.62	15.52	15.17	14.51	14.04	13.92	15.48	4
5	16.45	16.74	17.62	19.19	19.16	15.20	15.49	15.26	14.55	14.29	14.13	15.49	5
6	16.57	16.79	17.50	19.11	19.15	15.45	15.49	15.33	14.46	14.37	14.18	15.55	6
7	16.75	16.80	17.47	19.18	19.13	15.56	15.35	15.11	14.93	14.47	13.98	15.02	7
8	16.85	16.78	17.42	19.19	18.97	15.72	15.11	15.02	14.85	14.35	13.99	14.77	8
9	16.68	16.77	17.41	19.20	18.21	15.77	15.03	14.89	15.50	14.51	14.11	14.62	9
10	16.50	16.79	17.41	19.14	17.46	15.54	15.37	15.32	15.61	14.27	14.38	14.84	10
11	17.25	16.77	17.41	19.12	17.12	15.39	15.43	14.98	15.71	14.08	14.32	14.70	11
12	18.04	16.77	17.35	19.12	16.88	15.59	15.40	14.72	15.52	14.29	14.15	14.35	12
13	18.62	16.76	17.31	19.10	16.78	15.78	15.24	14.67	15.25	14.35	13.94	14.60	13
14	19.15	16.77	17.27	19.09	16.71	15.64	15.23	14.67	15.04	14.23	14.00	14.80	14
15	19.23	16.80	17.26	19.05	16.62	15.48	15.15	14.64	14.73	14.06	14.00	14.85	15
16	19.14	16.83	17.19	19.06	16.54	15.29	15.08	14.58	14.88	14.22	14.57	15.03	16
17	18.95	16.87	17.12	18.91	16.46	15.21	14.96	14.47	14.71	14.31	14.39	14.83	17
18	18.80	16.98	17.12	18.17	16.29	15.35	14.98	14.84	14.64	14.04	13.99	14.78	18
19	18.42	17.03	17.12	18.08	16.11	15.68	15.06	15.04	14.33	14.19	14.28	14.95	19
20	17.58	17.23	17.22	18.19	15.95	15.52	15.07	14.88	14.18	14.17	14.25	15.23	20
21	17.47	17.42	18.36	18.23	15.82	15.77	14.91	14.66	14.19	14.18	14.22	14.97	21
22	17.75	17.55	18.83	18.77	15.74	15.84	14.99	14.63	14.19	14.03	14.45	14.85	22
23	17.70	17.53	18.97	19.88	15.73	16.39	15.05	14.72	14.18	14.05	14.79	14.88	23
24	17.58	17.61	19.07	19.73	15.64	16.37	15.19	14.97	14.08	14.04	15.02	15.03	24
25	17.40	17.68	19.20	19.43	15.48	16.17	14.98	14.82	14.02	14.06	14.71	14.95	25
26	17.11	17.69	19.27	19.32	15.40	16.07	14.94	14.66	14.20	14.39	14.38	15.25	26
27	16.89	17.63	19.32	19.24	15.35	16.12	14.89	14.75	14.06	14.13	14.42	15.57	27
28	16.82	17.60	19.21	19.24	15.49	16.04	14.87	14.88	14.09	14.06	14.14	15.29	28
29	16.64	17.64	19.08	19.23	15.59	16.01	14.78	14.82	13.94	14.13	14.20	14.77	29
30	16.58	17.67	19.14	19.20		15.81	14.64	14.69	14.05	13.89	14.73	14.99	30
31	16.63		19.15	19.18		15.86		14.89		13.81	15.01		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
1-23-64	1400	20.21									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.O.B.B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 40 33	121 13 18	NE17 3S 7E				SEP 51-DATE		1951 1959	1959	1.11 0.00	USCGS USCGS

Station located 1.9 mi. above mouth, 7 miles SW of Ripon. Backwater from San Joaquin River at times affects the stage-discharge relationship. Prior records available at other sites. Drainage area 1,091 sq. mi. Altitude of gage is approx. 25 ft. (from U.S.G.S. topographic map).

TABLE B-5 (Cont.)

DAILY MEAN GAGE HEIGHT
(IN FEET)

WATER YEAR	STATION NO.	STATION NAME
1964	807020	SAN JOAQUIN RIVER NEAR VERNALIS

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	NR	13.78	15.38	14.65	13.63	NR	11.01	10.22	10.15	9.62	9.04	10.58	1
2	NR	13.69	15.40	14.68	13.52	NR	11.17	10.29	9.95	9.54	9.17	10.62	2
3	NR	13.81	15.39	14.72	13.47	NR	11.11	10.36	9.91	9.53	9.23	10.55	3
4	NR	13.85	15.27	14.57	13.39	10.10	10.98	10.48	9.86	9.55	9.21	10.51	4
5	NR	13.87	15.05	14.48	13.43	10.10	10.55	10.59	9.82	9.68	9.17	10.41	5
6	12.87	13.95	14.98	14.47	13.44	10.16	10.52	10.71	9.78	9.78	9.17	10.38	6
7	13.27	13.94	14.97	14.50	13.42	10.30	10.31	10.80	9.83	9.67	9.02	10.46	7
8	13.67	13.92	14.94	14.61	13.37	10.39	10.21	10.72	9.96	9.48	9.04	10.38	8
9	13.32	13.92	14.95	14.63	NR	10.42	10.19	NR	10.44	9.50	9.13	10.29	9
10	13.07	13.93	14.96	14.28	NR	10.37	10.15	NR	10.88	9.37	9.32	10.15	10
11	13.33	13.92	14.89	14.09	NR	10.28	10.15	NR	10.91	9.38	9.24	10.12	11
12	14.03	13.90	14.78	13.99	NR	10.38	10.18	10.11	10.88	9.33	9.18	10.13	12
13	14.63	13.90	14.78	13.80	NR	10.70	10.11	9.99	10.88	9.40	9.20	10.12	13
14	15.09	13.92	14.79	13.72	NR	10.68	10.00	9.93	10.45	9.22	9.12	10.22	14
15	15.32	13.98	14.73	13.78	NR	10.51	9.93	9.78	10.44	9.08	9.20	10.20	15
16	14.87	14.04	14.59	13.76	NR	10.40	10.06	9.78	10.28	8.98	9.33	10.12	16
17	14.60	14.12	14.58	13.75	NR	10.26	10.01	9.78	10.13	9.13	9.64	10.11	17
18	14.72	14.26	14.62	13.38	NR	10.25	10.00	9.91	9.92	9.23	9.61	10.11	18
19	14.73	14.33	14.54	13.24	NR	10.56	10.03	10.13	9.83	9.38	9.69	10.12	19
20	14.48	14.63	14.43	13.21	NR	10.54	10.37	10.12	9.89	9.41	9.60	10.16	20
21	14.84	14.86	14.72	13.32	NR	10.53	10.44	10.16	9.74	9.31	9.48	10.28	21
22	15.35	14.88	14.91	13.48	NR	10.55	10.41	10.16	9.87	9.28	9.53	10.31	22
23	15.34	14.98	14.94	14.37	NR	11.23	10.43	10.13	9.72	9.32	9.73	10.37	23
24	15.17	15.15	14.98	14.73	NR	11.42	10.46	10.14	9.49	9.24	10.01	10.83	24
25	14.96	15.20	15.29	14.22	NR	11.34	10.43	10.25	9.45	9.11	10.00	11.20	25
26	14.56	15.20	15.44	13.98	NR	11.28	10.46	10.26	9.41	9.26	9.86	11.34	26
27	14.13	15.18	15.52	13.83	NR	11.21	10.51	10.24	9.46	9.31	9.80	11.52	27
28	13.93	15.20	15.17	13.64	NR	11.09	10.54	10.29	9.61	9.28	9.84	11.71	28
29	13.74	15.30	14.87	13.62	NR	11.01	10.45	10.27	9.59	9.17	9.86	11.34	29
30	13.79	15.33	14.73	13.60		10.97	10.31	10.36	9.68	8.97	10.06	11.38	30
31	13.81		14.64	13.55		10.90		10.26		8.93	10.31		31

CREST STAGES

E — ESTIMATED

NR — NO RECORD

NF — NO FLOW

DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE	DATE	TIME	STAGE
10-15-63	1020	15.38	12-27-63	1400	15.58						
10-22-63	2400	15.45	1-24-64	0430	14.88						
12-2-63	0430	15.41									

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D. & B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37 40 34	121 15 51		79000	27.75	12-9-50	JUL 22-DEC 23 JAN 24-FEB 25 JUN 25-OCT 28 MAY 29-DATE		1931	1959	8.4 5.06 0.00	USED USCGS USCGS

Station located 30 ft. above the Durham Ferry Highway Bridge, 3 mi. below the Stanislaus River, 3.4 mi. NE of Vernalis. Records furn. by U.S.G.S. Drainage area is approx. 14,010 sq. mi.

TABLE B-6

DIVERSIONS - SAN JOAQUIN RIVER
(Vernalis to Fremont Ford Bridge)
October 1963 through September 1964

WATER USER	MILE AND BANK *	NUMBER AND SIZE OF PUMP IN INCHES	MONTHLY DIVERSION IN ACRE - FEET												TOTAL DIVERSION OCT.-SEPT. ACRE-Feet
			OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	
--DURHAM FERRY BRIDGE--	76.7														
--GAGING STATION - SAN JOAQUIN RIVER NEAR VERNALIS--	76.7														
Cook Land and Cattle Company	78.9R	1-14 1-24						164	522	160	383	858	727	285	3099
Cruze, Trudel and Gillmeister	79.4R	1-20					2	136	41	77	79	59	153	44	591
--STANISLAUS RIVER--	79.7R														
Faith Ranch	79.8R	1-16	161	3			60	164	147	140	172	245	220	240	1552
W. C. Blewett Estate	80.7L	1-12	172						259	284	251	441	477	181	2065
W. C. Blewett Estate	81.8L	2-12 1-14	540				394	128	970	1230	1110	1980	1850	61	8263
--GAGING STATION - SAN JOAQUIN RIVER AT MAZE ROAD BRIDGE--	81.85														
Blewett Mutual Water Company	81.95L	1-10 2-12	208				3	557	869	1280	1170	1210	1330	770	7397
El Solyo Water District	82.0L	1-10 1-16 3-18	125				164	1380	2420	2550	2110	3520	3680	1360	17310
--GAGING STATION - SAN JOAQUIN RIVER AT HETCH HETCHY AQUEDUCT CROSSING--	82.65														
El Solyo Ranch	82.9L	1-16	41					105	202	250	77	204	384	282	1545
El Solyo Ranch	83.5L	1-12						28	43	117	64	85	59	35	431
El Solyo Ranch	83.7L	1-12	55					202	248	285	189	264	327	289	1859
Faith Ranch	84.4R	1-16 1-20	514	60			320	422	906	1010	599	904	781	604	6120
--TUOLUMNE RIVER--	91.0R														
--GAGING STATION - SAN JOAQUIN RIVER AT WEST STANISLAUS IRRIGATION DISTRICT INTAKE CANAL--	91.8L														
--WEST STANISLAUS IRRIGATION DISTRICT INTAKE CANAL--	91.8L														
West Stanislaus Irrigation District	91.8L	1-12 1-24 6-26	1530	151		407	3520	6390	7650	7850	9290	7420	5000	2910	52120
Fred Lara #1	** (0.6S)	1-14						164	6	154	200	288	152	47	1011
Frank Sarmento #1	** (0.7N)	3-16	152					1230	873	697	929	1050	748	507	6186
Frank Sarmento #2	** (1.1N)	1-14 1-16	583				74	454	529	374	361	610	363	107	3455
Fred Lara #2	** (2.2S)	1-16					19	9	30	29	60	12	55		214
Frank Sarmento #3	** (2.3N)	2-16						250	103	153	291	364	383	100	1644
J. V. Steenstrup Estate	93.1R	1-12 1-14							338	634	393	1260	1370	135	a 4130
T. C. Daily	94.1L	1-3 1-6	21				37	159	49	131	93	129	75	25	719
Rancho Dos Rios	94.7R	1-12	15	1		1	149	3	174	175	314	419	226	305	1782
E. L. Brazil	95.5R	1-16	15	3		2	94	51	102	139	70	163	221	35	995
Charles Correia	95.8R	1-10								50	19	27	20	12	128
--GAGING STATION - SAN JOAQUIN RIVER AT GRAYSON--	95.95L														
Island Dairy	96.0L	1-18	107				211	119	318	266	438	519	568	345	2891
--LAIRD SLOUGH BRIDGE--	96.05														
E. S. Brush	98.5R	1-7	25						6	44		45	33		153
Rancho El Pescadero	98.9L	1-18	23		1	1	120	22	140	230	216	246	29	73	1101
--GAGING STATION - SAN JOAQUIN RIVER AT PATTERSON BRIDGE--	104.4L														
Patterson Water District	104.4L	1-14 2-18 3-20 1-36					322	4290	6670	6190	7210	9280	8800	5080	47840
Chase Brothers	104.5R	1-18	21					303	480	289	375	551	541	470	3030
--PATTERSON BRIDGE--	104.6														
Chase Brothers	106.5R	1-12	10					367	244	453	631	448	517	391	3061
Tony Spinelli	109.1R	1-12					35	35	36	75	44	80	31	80	416
Twin Oaks Irrigation Company	109.8L	1-12 2-16 1-18	39				134	1280	980	2550	2290	2770	2280	1810	a 14130
T. J. Henderson	110.8R	2-8	20				12	120	204	351	307	308	321	300	1943

TABLE B-6 (Cont.)
 DIVERSIONS - SAN JOAQUIN RIVER
 (Vernalis to Fremont Ford Bridge)
 October 1963 through September 1964

WATER USER	MILE AND BANK *	NUMBER AND SIZE OF PUMP IN INCHES	MONTHLY DIVERSION IN ACRE - FEET												TOTAL DIVERSION OCT-SEPT. ACRE-FEET
			OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	
L. A. Thompson	112.55R	1-18						32	331	231	98	33	30		755
Frank C. Mosier	113.4R	1-12	72				79	107	143	143	155	169	167	155	1190
--GAGING STATION - SAN JOAQUIN RIVER AT CROWS LANDING BRIDGE--	113.4														
Frank C. Mosier	114.63R	b 1-4 1-8						15	47	30	67	70	46	51	326
Manual A. Serpa	114.75R	2-10	43				146	50	257	189	322	410	356	263	2036
--ORESTIMBA CREEK--	115.2L														
Roy F. Crow	115.8L	1-10							47	314	42	250	205	11	896
L. B. Crow	116.05L	1-14	23			24	41	51	86	157	94	205	162	108	951
John W. Greer	116.5R	1-12						101	294	99	156	206	276	190	1322
Stevinson Water District	121.3R	1-18	12				37	121	242	262	190	450	322	272	1908
--MERCED RIVER SLOUGH--	122.2R														
--GAGING STATION - SAN JOAQUIN RIVER NEAR NEWMAN--	123.7														
--MERCED RIVER--	123.75R														
Stevinson Corporation	129.1R	1-16	19				193	222	212	312	381	195	443	240	2217
--GAGING STATION - SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE--	129.5														
<u>VERNALIS TO FREMONT FORD BRIDGE</u>															
Total			4546	218	1	435	6166	19230	27040	29950	31240	37750	33730	17870	208700
Average cubic feet per second			74	4	0	7	107	313	454	487	525	614	549	300	288
Monthly use in percent of seasonal			2.2	0.1	0	0.2	3.0	9.2	13.0	14.4	15.0	18.1	16.2	8.6	

* Mileage along San Joaquin River from its mouth, 4.5 miles below Antioch.

** West Stanislaus Irrigation District Canal. The intake canal joins the San Joaquin River at mile 91.8L. Distance from the river and the bank is shown in parentheses.

a Includes an undetermined amount of water returned to river by spill.

b The 4" unit was installed in 1964.

TABLE B-6 (Cont.)
 DIVERSIONS - SAN JOAQUIN RIVER
 (Fremont Ford Bridge to Gravelly Ford)
 October 1963 through September 1964

WATER USER	MILE AND BANK *	NUMBER AND SIZE OF PUMP IN INCHES	MONTHLY OIVERSION IN ACRE - FEET											TOTAL OIVERSION OCT.-SEPT. ACRE-FEET			
			OCT.	NOV.	DEC.	JAN.	FEB	MAR.	APR.	MAY	JUNE	JULY	AUG.		SEPT.		
--GAGING STATION - SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE--	129.5																
--GAGING STATION - SAN JOAQUIN RIVER NEAR DOS PALOS--	186.0																
San Luis Canal Company (a)	186.6L	Gravity	7517	3486	2751	1279	7404	12260	18284	22586	25030	26775	26120	18828	169323		
--FIREBAUGH BRIDGE--	198.4																
--GAGING STATION - SAN JOAQUIN RIVER NEAR MENDOTA--	206.2																
--MENDOTA DAM--	208.63																
Central California Irrigation District (a)	208.8L	Gravity	19460	4856	107	5871	28477	50686	66553	75168	75667	90252	83826	43097	d 544020		
--FRESNO SLOUGH--	209.0L																
--DELTA-MENDOTA CANAL--	δ (0.2L)																
Firebaugh Canal Company (a)	δ (0.4L)		835	117	20	0	1722	9956	11748	13440	14231	13765	5946	1203	72983		
M. Jensen							NO DIVERSION										
M. L. Dudley	δ (3.4L)		0	0	0	0	182	438	373	347	530	545	454	14	2883		
State of California Mendota Waterfowl Management (b)	δ (6.45 - 8.20)		4762	1960	446	470	26	54	186	79	2212	2414	2634	3120	18363		
Fresno Slough Water District (b)			0	0	0	0	651	141	569	696	1123	873	661	0	4714		
--JAMES BYPASS--	δ (11.80R)																
Traction Water District (b)	δδ (0.75)		192	0	0	34	573	240	611	756	912	1020	1152	1218	6708		
Reclamation District (b) 1606	δδ (1.50)		0	0	0	0	40	36	54	0	137	123	71	7	468		
James Irrigation District (b)	δδ (4.4)		36	0	0	0	5336	2729	4348	5338	8846	9483	9082	3352	4855		
Tranquillity Irrigation District (b)	δ (12.00 - 13.75)		210	0	0	28	5361	1722	2164	2045	5395	7018	5353	1327	30623		
Melvin D. Hughes (b)	δ (12.20)		0	0	0	0	20	0	0	0	28	14	22	0	84		
--LONE WILLOW SLOUGH--	219.8R																
Columbia Canal Company (a)	219.8R		3050	2523	145	1166	1978	4149	6006	8630	8083	8785	8652	6141	59308		
State Center Duck Club (b)		e	173	89	40	0	0	0	0	0	0	0	0	0	302		
C. Sawall		f						NO DIVERSION									
Mendots Duck Club (b)		g						NO DIVERSION									
M. Beck (b)		h	20	2	0	0	0	0	0	0	0	0	0	0	22		
Mario Giomi (c)			0	0	0	0	159	52	61	10	32	52	34	0	400		
F. A. Yearout			0	0	0	0	54	63	56	52	38	0	85	0	348		
Tulle Gun Club		j	34	0	0	0	0	0	0	0	0	0	0	0	34		
Westlands Water District			0	0	0	0	0	0	0	216	1038	1824	1962	488	5528		
<u>FREMONT FORD BRIDGE TO GRAVELLY FORD</u>																	
Total			37174	13008	3501	9237	53254	77535	108821	127373	141299	164221	154359	80064	969846		
Average cubic feet per second			605	219	569	150	926	1261	1829	2072	2375	2671	2510	1346	1336		
Monthly use in percent of seasonal			3.8	1.3	0.4	1.0	5.5	8.0	11.2	13.1	14.6	16.9	15.9	8.3			

- * Mileage along San Joaquin River from its mouth 4.5 miles below Antioch.
 δ Plant is located on Fresno Slough which diverts from San Joaquin River at mile 209.0L. Distance from San Joaquin River and bank is shown in parentheses.
 δδ Plant is located on James Bypass which diverts from Fresno Slough at mile δ (11.80R). Distance from Fresno Slough and bank are shown in parentheses.
 a Records furnished by contracting entities.
 b Records furnished by U. S. Bureau of Reclamation.
 c Formerly listed as J. E. Jennings.

- d Includes Class I water.
 e 1 - 6" pump located on arm of slough at S.W. corner S. 12, T. 14 S., R. 15 E.
 f 1 - 8" pump located on arm of slough, 1500' W. of S.E. corner S. 18, T. 14 S., R. 16 E.
 g 1 - 8" pump located on arm of slough at S.W. ¼ corner S. 11, T. 14 S., R. 15 E.
 h 1 - 8" pump located on arm of slough, 1400' S. of N.E. corner S. 24, T. 14 S., R. 15 E.
 j 1 - 8" pump located on arm of slough adjacent to M. Beck.

TABLE B-6 (Cont.)
 DIVERSIONS - SAN JOAQUIN RIVER
 (Gravelly Ford to Friant Dam)
 October 1963 through September 1964

WATER USER	MILE AND BANK *	NUMBER AND SIZE OF PUMP IN INCHES	MONTHLY DIVERSION IN ACRE - FEET												TOTAL DIVERSION OCT.-SEPT. ACRE- FEET
			OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	
W. A. Kochergen 1	233.66R	1-6						8	27		22	31	36		124
Dewey W. Johnson 1	235.33R	1-5 1-10						16	26	42	50	61	81	17	293
--SKAGGS BRIDGE--	238.18														
--U. S. HIGHWAY 99 BRIDGE--	247.38														
--SANTA FE RAILROAD BRIDGE--	249.23														
Miller Brothers	251.46L	1-6	23				8	7	73	86	70	92	64	54	477
Sycamore Island Stock Ranch 2	256.52R	1-8							3	50	50	93	50	37	283
Oscar Spano River Ranch 1	257.10L	1-16	33				41	36	112	148	218	257	224	134	1203
Oscar Spano River Ranch 2	257.70L	1-12	10	6			7	30	33	51	43	157	151	162	650
L. D. Cobb	258.08R	1-6 1-7					15	97	21	8	147	176	132		596
--STATE HIGHWAY 41 BRIDGE--	258.33														
R. J. Curtis	258.39L	1-4 1-7									21	61	41		123
W. E. Roberts 1	258.80L	1-6	4					5	44	16	38	52	42	5	206
W. E. Roberts 2	258.90L	1-12	29	2	1	1	1	9	44	70	97	99	85	89	527
J. E. Cobb	259.39R	2-6	1				39	4	19	5	51	79	79	16	293
--DLD LANES BRIDGE--	259.78														
J. E. Cobb 3	260.40R	1-6	34	1				39	72	105	121	126	122	69	689
R. C. Arnold	261.53R	1-4 1-5	5				16	35	46	67	87	142	146	62	606
Duane M. Folsom	261.70L	1-6	20					38	55	99	117	161	144	90	724
E. G. Rank, Jr.	262.32L	1-5	12				11	17	13	56	45	63	50	36	303
Dale McCoon 1	262.60R	1-5						25	98		32	153	134	30	472
W. H. Rohde	262.66L	1-7						46	1	6	36	86	60	12	247
Dale McCoon 2	263.40R	1-7						5	80	16	27	171	141	27	467
Dale McCoon 3	263.48R	1-6	5					29	20	17	23	126	74		294
H. K. Jensen	263.76R	1-5	31				37	15	54	67	96	91	78	58	527
H. W. Ball 4	264.08L	1-6									36	103	110	80	329
Ike D. Ball	264.60R	1-6	34				29	57	94	114	108	111	109	96	752
W. F. Ball	264.83L	1-4 1-5	12	1			10	9	25	50	61	67	69	53	357
Virgil Durando	267.56L	1-8	3	1	11		10	45	52	57	180	204	210	118	891
--GAGING STATION - SAN JOAQUIN RIVER BELOW FRIANT--	268.13L														
--FRIANT BRIDGE--	268.88														
--COTTONWOOD CREEK--	269.53R														
--FRIANT DAM--	269.63														
GRAVELLY FORD TO FRIANT DAM															
Total			252	11	12	1	224	567	968	1114	1738	2710	2390	1240	11230
Average cubic feet per second			4.1	0.2	0.2	0	3.9	9.2	16	18	29	44	39	21	15
Monthly use in percent of seasonal			2.2	0.1	0.1	0	2.0	5.1	8.6	9.9	15.5	24.1	21.3	11.0	

* Mileage along San Joaquin River from its mouth 4½ miles below Antioch.

TABLE B-6 (Cont.)
DIVERSIONS - MERCED RIVER
October 1963 through September 1964

WATER USER	MILE AND BANK ABOVE MOUTH	NUMBER AND SIZE OF PUMP IN INCHES	MONTHLY DIVERSION IN ACRE - FEET												TOTAL DIVERSION OCT.-SEPT. ACRE-Feet
			OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	
--HILLS FERRY BRIDGE--	1.1														
Stevinson Water District #1	1.8R	1-16	43	116			11	307	231	227	257	255	493	273	2213
Stevinson Water District #2	3.8R	1-18	141		3	4	77	462	557	580	718	868	699	450	4559
Milton Gordon	4.3L	1-10	3	1		2	4	3	27	55	53	64	29	37	278
--GAGING STATION - MERCED RIVER NEAR STEVINSON--	4.6														
Maria DeAngelis	5.8L	1-12	10				42		32	43	62	80	96	49	414
Stevinson Water District	6.1L	1-20	114	3	11	4	279	404	466	464	548	606	553	332	3784
Stevinson Water District #3	7.7L	1-20					154	551	943	106	222	1150	937	551	4614
Manuel Clemintino	8.5L	1-12	18				22	16	34	25	32	62	74		283
Manuel Clemintino	8.9L	1-12	11					66	55	26	48	50	44	42	342
Samuel B. McCullagh	9.4L	1-8	14		2					130	8	135	82	6	377
Mrs. J. R. Jacinto	9.6L	1-12	14	42			30	103	100	105	122	145	66	40	767
Mrs. J. B. Silva, E. and J. Gallo Winery Ranch, L. Alves and A. Mattos	10.35L	1-10	21	6	5	3	9	115	131	173	177	304	108	110	1162
Manual Freitas	10.9L	1-12	35					57	82	68	119	106	130	44	641
R. E. Prusso and John Vierra	10.9L	1-8 1-12	13	4				63	84	50	106	128	103	99	650
E. and J. Gallo Winery Ranch	11.6L	1-18						158	319	29	340	342	269		1457
--MILLIKEN BRIDGE--	11.65														
E. and J. Gallo Winery Ranch	12.35L	1-10						19	38	6	61	87	17		228
Anthony L. Calderia	12.5R	1-12	7					21	38	55	16	48	64	43	292
E. and J. Gallo Winery Ranch	12.85L	1-12						67	109	17	177	250	42		662
J. M. Souza	14.5L	1-10	32						55	65	64	66	97	55	434
--GAGING STATION - MERCED RIVER NEAR LIVINGSTON--	16.49L														
E. and J. Gallo Winery Ranch	16.5L	1-14							136	124	63	234	97		654
J. E. Gallo	20.4L	1-8						130	182	32	178	224	8		754
--U. S. HIGHWAY 99 BRIDGE--	21.04														
--SOUTHERN PACIFIC RAILROAD BRIDGE--	21.05														
Gallo Cattle Company	22.2R	1-8 1-16	38	1	1	5	72	241	244	135	248	438	310	204	1937
Gallo Cattle Company	22.8R	1-12 1-15					57	128	183	90	169	325	198	38	1188
Merced River Farms Association	26.3R	1-8							67	71	50	78	71	31	368
--SANTA FE RAILROAD BRIDGE--	27.05														
W. C. Magneson	27.5R	1-10	31						31	48	14	57	35	50	266
--GAGING STATION - MERCED RIVER AT CRESSEY--	27.55														
--CRESSEY BRIDGE--	27.55														
Manuel Silva	29.9R	1-6 1-10							13	71	67	91	61		303
Manuel Silva	30.95R	1-12							62	67	90	138	89	78	524
Rancho Con Valor	31.1L	1-8	31						22	119	54	122	76	67	491
Manuel Silva	31.4R	1-10							91	237	118	261	210	145	1062
P. Hilarides	32.3L	1-12							4	44		3	52	27	130
--SHAFFER BRIDGE--	32.5														
Harry P. Schmidt and Son	33.1R	1-10							3	138	18	57	107	3	326
Walter Bettencourt	34.5L	1-12													
W. F. Bettencourt, P. Hilarides, and Cowel Lime and Cement Company	36.9L	Gravity	648	752	597	713	25	35	521	887	956	1330	1080	566	8110
Amsterdam Orchards Incorporated	39.1L	1-14				1	75	116	90	32		24	16		354
Ratzlaff Brothers	40.2L	a 1-2 1-4						10	23	18	44	56	58	23	232
--COX FERRY BRIDGE--	42.1														
Cowel Ditch	45.3R	Gravity	511	654	582	819	787	827	2410	3620	3390	3720	3410	1620	22350
--GAGING STATION - MERCED RIVER BELOW SNELLING--	46.2														
MERCED RIVER															
Total			1735	1579	1201	1551	1644	3899	7383	7957	8589	11900	9781	4983	62210
Average cubic feet per second			28	27	20	25	29	63	124	129	144	194	159	84	86
Monthly use in percent of seasonal			2.8	2.5	1.9	2.5	2.7	6.3	11.9	12.8	13.8	19.1	15.7	8.0	

a The 2" unit was installed in 1964.

TABLE B-6 (Cont.)
 DIVERSIONS - TUOLUMNE RIVER
 October 1963 through September 1964

WATER USER	MILE AND BANK ABOVE MOUTH	NUMBER AND SIZE OF PUMP IN INCHES	MONTHLY DIVERSION IN ACRE - FEET												TOTAL DIVERSION OCT.-SEPT. ACRE-FEET
			OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	
E. T. Mape	1.3R	a 2-14	73			55	429	560	366	810	806	1120	1110	386	5715
J. V. Steenstrup Estate	1.9L	2-12					19	96	176	161	83	258	347	13	1153
J. V. Steenstrup Estate	2.9L	1-10 1-12		1			28	445	224	94	318	337	343	108	1898
--GAGING STATION - TUOLUMNE RIVER AT TUOLUMNE CITY (SHILOH BRIDGE)--	3.35														
Bancroft Fruit Farms	5.0R	1-10	10					21	44	47	58	57	42	37	316
Della Battestein	5.9L	b 1-16						391	869	356	603	948	1199	744	5110
Western Farms	6.3L	1-16	1					35	108	11	71	114	69	22	431
Eugene Boone, Galen Hartwich, and Dr. Harold Willis	7.1R	1-10	7				10	4	118	4	34	51	95	72	395
Beth Wootten	8.4R	1-10					23	10	32	51	5	20	43	27	211
Ella T. Rahilly Estate	8.5L	1-10	16					25	20	12	29	61	8		171
A. C. Watkins Estate	9.4L	1-20	7		2		5	90	593	523	168	561	406	40	2395
McClure Ranches	9.7R	1-12	16				20	4	23		23	3	13		102
Homer Couchman (c)	10.2R	1-14					17	3	107	78	123	107	120	129	684
--CARPENTER ROAD BRIDGE--	12.9														
--SEVENTH STREET BRIDGE--	15.75														
--SOUTHERN PACIFIC RAILROAD BRIDGE--	15.8														
--U. S. HIGHWAY 99 BRIDGE--	16.05														
--GAGING STATION - TUOLUMNE RIVER AT MODESTO--	16.05														
--DRY CREEK--	16.5R														
--EAST MODESTO BRIDGE--	19.3														
Jack Gardella	20.3R	1-10	19					4	23	19	51	19	51	56	242
--SANTA FE RAILROAD BRIDGE--	21.6														
--SANTA FE ROAD BRIDGE--	21.65														
Mrs. A. L. Leib	22.8R	1-3 1-6						6	25	7	26	27	28	13	132
--GEER AVENUE BRIDGE--	26.0														
Michel Investment Company	28.8R	1-8	10				1	24	35	22	79	54	100	50	375
J. W. and Lola Mae Short	29.8L	1-10	17				2	108	60	56	34	72	63	8	d 420
Firpo Ranch	30.2L	1-10			1		9	15	55	59	30	54	39	28	290
--SOUTHERN PACIFIC RAILROAD BRIDGE (OAKDALE BRANCH)--	31.5														
--GAGING STATION - TUOLUMNE RIVER AT HICKMAN BRIDGE--	31.7														
Iva M. Ketcham (e)	39.4R	1-8	18					39	62	116	96	159	134	111	735
Westley N. Sawyer	39.8L	1-8	7					13	64	90	90	95	97	54	510
--GAGING STATION - TUOLUMNE RIVER AT ROBERTS FERRY BRIDGE--	39.9														
Westley N. Sawyer	40.8L	1-14	24					26	75	80	82	97	106	54	544
Curtner Zanker	45.7L	1-10	1	1		1	1	1	90	58	55	51	36	33	328
Dolling Brothers	46.3R	1-8	20					15	57	68	55	90	103	80	488
--STATE HIGHWAY 132 BRIDGE--	47.4														
--GAGING STATION - TUOLUMNE RIVER AT LA GRANGE BRIDGE--	50.5														
<u>TUOLUMNE RIVER</u>															
Total			246	2	3	56	564	1910	3231	2730	2902	4323	4605	2073	22640
Average cubic feet per second			4	0	0	1	10	31	54	44	49	70	75	35	31
Monthly use in percent of seasonal			1.1	0	0	0.2	2.5	8.4	14.3	12.1	12.8	19.1	20.3	9.2	

a One 14" unit was installed in 1964.

b Replaces a 14" unit.

c Formerly listed as Raymond Boone.

d Includes an undetermined amount of water returned to river by spill.

e Formerly listed as A. E. Ketcham Estate.

TABLE B-6 (Cont.)
 DIVERSIONS - DRY CREEK
 October 1963 through September 1964

WATER USER	MILE AND BANK ABOVE MOUTH	NUMBER AND SIZE OF PUMP IN INCHES	MONTHLY DIVERSION IN ACRE - FEET												TOTAL DIVERSION OCT-SEPT. ACRE-Feet
			OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	
--MODESTO-EMPIRE TRACTION COMPANY RAILROAD BRIDGE--	0.7														
--STATE HIGHWAY 132 BRIDGE (YOSEMITE BOULEVARD)--	0.8														
--LA LOMA BRIDGE--	1.2														
--EL VISTA AVENUE BRIDGE--	2.9														
--GAGING STATION - DRY CREEK NEAR MODESTO--	5.3R														
--CLAUS ROAD BRIDGE--	5.4														
--SANTA FE RAILROAD BRIDGE--	6.4														
--CHURCH STREET BRIDGE--	7.2														
--WELLSFORD ROAD BRIDGE--	8.7														
--ALBERS ROAD BRIDGE--	11.0														
--MODESTO IRRIGATION DISTRICT CANAL CROSSING--	11.1														
Edward Johnson	12.6R	1-6	7						7	12	2	19	37	26	110
Edward Johnson	12.7R	1-6	22						28	17	39	46	64	24	240
Joe Fagundes	14.7R	1-10	22	2	4	7	61	78	108	91	120	144	166	106	909
--OAKDALE-WATERFORD HIGHWAY BRIDGE--	17.4														
<u>DRY CREEK</u>															
Total			51	2	4	7	61	78	143	120	161	209	267	156	1259
Average cubic feet per second			1	0	0	0	1	1	2	2	3	3	4	3	1.7
Monthly use in percent of seasonal			4.0	0.2	0.3	0.6	4.8	6.2	11.4	9.5	12.8	16.6	21.2	12.4	

TABLE B-6 (Cont.)
 DIVERSIONS - STANISLAUS RIVER
 October 1963 through September 1964

WATER USER	MILE AND BANK ABOVE MOUTH	NUMBER AND SIZE OF PUMP IN INCHES	MONTHLY DIVERSION IN ACRE - FEET												TOTAL DIVERSION OCT.-SEPT. ACRE- FEET
			OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	
--GAGING STATION - STANISLAUS RIVER NEAR MOUTH--	1.9R														
Cook Land and Cattle Company and C. M. Carroll	1.9R	1-16							13	20	9	9	10	57	118
C. C. Angyal	2.4R	1-18	63					198	146	153	309	318	239	125	1551
Faith Ranch	3.4L	2-12 1-16	408				299	290	443	673	566	660	618	506	4463
Reclamation District 2064	4.0R	1-14 1-16 2-20	223				344	689	2630	2040	2340	3080	2670	2050	16070
Reclamation District 2075	4.05R	2-16 1-20	483		31	42	739	976	2160	2280	2270	2580	2550	1890	16000
D. F. Koetitz	4.7L	1-14					39	49	324	356	206	288	331	312	1905
E. T. Mape	4.75L	1-20					131	212			110	269	117		839
Henry Pelucca	5.5L	1-16	18					53	55	52	156	149	167	91	741
Alice Gill	6.4L	1-12								370	312	298	453	265	a 1698
D. J. Macedo	8.4R	1-16	123				58	213	263	403	203	539	589	498	2889
N. E. Cannon	8.7R	1-10	19					271	281	266	321	459	430	163	2210
--GAGING STATION - STANISLAUS RIVER AT KOETITZ RANCH--	9.35L														
D. F. Koetitz	9.4L	1-12					51	181	369	258	253	622	420	342	2496
John L. Hertle	9.8L	1-10	6					40	36	41	40	39	56	34	292
Nelson Santos	10.0R	1-16	18						102	94	20	55	81	33	403
Nelson Santos	10.5R	1-16	25						263	122	63	127	180	68	848
John L. Hertle	10.7L	1-10	7					17	9	9	10	15	17	5	89
--GAGING STATION - STANISLAUS RIVER AT RIPON--	15.7L														
--SOUTHERN PACIFIC RAILROAD BRIDGE--	15.7														
--U. S. HIGHWAY 99 BRIDGE--	15.7														
A. Girardi	17.7L	1-16				2	1		219	126	92	249	182	115	a 986
E. J. Freethy	19.0R	1-14					29		130	134	123	200	236	88	940
Libby, McNeill, and Libby	20.9R	1-14						250	150	55	264	300	268	164	1451
Heath Ranch	21.2L	1-6	71					7	8	50	61	53	74	91	415
Mark Rumble	23.4L	1-8									3	3	7		13
--MODESTO-ESCALON HIGHWAY BRIDGE--	29.6														
F. K. Floden	29.9L	1-10						NO DIVERSION							
--SANTA FE RAILROAD BRIDGE--	33.4														
--GAGING STATION - STANISLAUS RIVER AT RIVERBANK--	33.6														
Oakdale Irrigation District (Crawford pump) (b)	37.7L	1-14	17					86	144	115	164	112	260	6	a 904
Oakdale Irrigation District (Brady pump) (b)	39.1L	1-12	46					81	94	130	145	157	191	54	a 898
--OAKDALE-STOCKTON HIGHWAY BRIDGE--	41.2														
--SOUTHERN PACIFIC RAILROAD BRIDGE (OAKDALE BRANCH)--	41.2														
--GAGING STATION - STANISLAUS RIVER AT ORANGE BLOSSOM BRIDGE--	47.0														
<u>STANISLAUS RIVER</u>															
Total			1527		31	44	1691	3613	7839	7747	8040	10580	10150	6957	58220
Average cubic feet per second			25		1	1	29	59	132	126	135	172	165	117	80
Monthly use in percent of seasonal			2.6		0.1	0.1	2.9	6.2	13.5	13.3	13.8	18.2	17.4	11.9	

- a Includes an undetermined amount of water returned to river by spill.
 b Oakdale Irrigation District for season of 1964 maintained plants at miles 27.7L and 39.1L to supplement district gravity supply.

TABLE B-6 (Cont.)
 DIVERSIONS - TULE RIVER
 October 1963 through September 1964

WATER USER	MILE AND BANK *	NUMBER AND SIZE OF PUMP IN INCHES	MONTHLY DIVERSION IN ACRE - FEET ^a											TOTAL DIVERSION OCT.-SEPT. ACRE-FEET	
			OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.		SEPT.
--SUCCESS DAM--	0.0														
--GAGING STATION - TULE RIVER BELOW SUCCESS DAM--	0.35														
Campbell Moreland Ditch	2.4L	Gravity	832	156	176	944	71	20	55	1485	740	697	888	1412	7476
--PORTER SLOUGH--	2.4R														
--GAGING STATION - PORTER SLOUGH AT PORTERVILLE (B LANE BRIDGE)--	** (2.4)														
--PIONEER SPILL--	** (3.7R)														
Porter Slough Ditch	** (4.5R)	Gravity	155	191							417	531	292		1586
--GAGING STATION - PORTER SLOUGH NEAR PORTERVILLE (NEWCOMB ROAD)--	** (6.1)														
Vandalia Ditch (b)	3.1L	Gravity	165							209	143	132	211	44	904
--SANTA FE RAILROAD BRIDGE--	5.1														
Poplar Ditch	5.8L	Gravity	123	1460	943	1253	337	21		365	3050	5815	2422	121	15910
--STATE HIGHWAY 190 BRIDGE--	5.9														
--SOUTHERN PACIFIC RAILROAD BRIDGE--	6.0														
Hubbs-Miner Ditch (c)	6.4R	Gravity	171	153				181	106	236	419	728	427	160	2581
--STATE HIGHWAY 65 BRIDGE--	6.6														
Rhodes-Fine Ditch (c)	8.4L	Gravity							87	942	374		5		1408
--OLIVE AVENUE BRIDGE--	9.9														
--FRIANT KERN CANAL CROSSING--	10.5														
Woods-Central Ditch (c)	11.0L	Gravity			647	559		3							1209
--GAGING STATION - TULE RIVER BELOW PORTERVILLE--	11.8														
--OTTLE BRIDGE--	14.4														
<u>TULE RIVER</u>															
Total			1446	1960	1766	2756	408	225	248	3237	5143	7903	4245	1737	31070
Average cubic feet per second			24	33	29	45	7	4	4	53	86	129	69	29	42
Monthly use in percent of seasonal			4.7	6.3	5.7	8.9	1.3	0.7	0.8	10.4	16.5	25.4	13.7	5.6	

* Mileage downstream from Success Dam.

** Figure in parenthesis indicates distance along Porter Slough from Tule River.

a Records for July, August, and September furnished by the Tule River Association and reviewed by the Department of Water Resources.

b The greater portion of this water was used to recharge Vandalia Irrigation District well field.

c During periods of no record, the recorder at this station was deactivated. This recorder was activated prior to anticipated diversion periods upon notification from the Tule River Association. It is assumed there was no flow during the "no record" periods.

TABLE 6-7

DIVERSIONS AND ACREAGE IRRIGATED - EAST SIDE CANALS AND IRRIGATION DISTRICTS*
October 1963 through September 1964

WATER USER	DIVERSION													ACREAGE IRRIGATED	
	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	TOTAL	GENERAL	RICE
<u>Friant-Kern Canal</u>															
Total acre-feet diverted	93329	23222	1557												
Average cubic feet per second	1568	390	25	0	92337	75012	32460	36786	112026	155538	145948	49348	817563		
Monthly use in percent of seasonal	11.4	2.8	.2	0	1605	1220	546	598	1883	2530	2374	829	1126		
<u>Madera Canal</u>															
Total acre-feet diverted	9965	492	0	0	0	28154	0	5133	47560	72890	49264	7281	220739		
Average cubic feet per second	167	83	0	0	0	458	0	83	799	1185	801	122	304		
Monthly use in percent of seasonal	4.5	.2	0	0	0	12.8	0	2.3	21.5	33.0	22.3	3.3			
<u>Merced Irrigation District</u>															
<u>Merced River</u>															
Main Canal	2755	0	0	0	0	0	75660	63610	84134	104860	73586	0	a 424645	b 111826	5297
Northside Canal	494	117	123	188	125	135	3074	3687	3731	4737	3521	520	20452		
Total acre-feet diverted	3249	117	123	188	125	135	78754	87297	87865	109617	77107	520	445097		
Average cubic feet per second	53	2	2	3	2	2	1324	1420	1477	1783	1254	9	615		
Monthly use in percent of seasonal	.7	0	0	0	0	0	17.7	19.6	19.8	24.7	17.4	.1			
<u>Turlock Irrigation District</u>															
<u>Tuolumne River</u>															
Total acre-feet diverted	34187	18960	1595	1459	9540	40982	73190	59006	73071	80648	77375	52401	c 522414	d 173043	0
Average cubic feet per second	556	319	26	24	166	666	1230	960	1228	1312	1258	881	722		
Monthly use in percent of seasonal	6.6	3.6	.3	.3	1.8	7.9	14.0	11.3	14.0	15.4	14.8	10.0			
<u>Modesto Irrigation District</u>															
Total acre-feet diverted	20049	45	43	304	90	26607	34828	37342	40791	40163	32848	20956	e 254068	f 74161	450
Average cubic feet per second	326	1	1	5	2	433	585	607	686	653	534	352	351		
Monthly use in percent of seasonal	7.9	0	0	.1	0	10.5	13.7	14.7	16.1	15.6	12.9	8.3			
<u>Waterford Irrigation District</u>															
Total acre-feet diverted	2049	0	0	0	0	2060	4189	5206	5568	5241	3917	2164	g 30394	h 6819	0
Average cubic feet per second	33	0	0	0	0	34	70	85	94	85	64	36	42		
Monthly use in percent of seasonal	6.7	0	0	0	0	6.8	13.8	17.1	18.3	17.3	12.9	7.1			
<u>Oakdale Irrigation District</u>															
<u>Stanislaus River</u>															
Northside Canal	6811	0	0	0	0	7458	15848	16572	16044	16535	16934	12899	109101	i 33381	3290
Southside Canal	10201	0	0	0	0	13745	22975	23758	24499	26302	26992	20852	169324	j 33869	416
Total acre-feet diverted	17012	0	0	0	0	21203	38823	40330	40543	42837	43926	33751	278425	k 67250	k 3706
Average cubic feet per second	277	0	0	0	0	345	652	656	681	697	714	567	385		
Monthly use in percent of seasonal	6.1	0	0	0	0	7.6	13.9	14.5	14.6	15.4	15.8	12.1			
<u>South San Joaquin Irrigation District</u>															
Total acre-feet diverted	8284	0	0	0	6812	17109	46558	44205	36513	40096	44051	32799	278427	m 62632	0
Average cubic feet per second	135	0	0	0	123	278	816	719	614	652	716	551	385		
Monthly use in percent of seasonal	3.0	0	0	0	2.5	6.1	17.4	15.9	13.1	14.4	15.8	11.8			

- * Data for Madera and Friant-Kern Canals furnished by U. S. Bureau of Reclamation, all other data furnished by individual irrigation districts.
- a An additional 118,352 acre-feet of water was pumped from wells.
- b Of this acreage, 3,341 was double cropped. It does not include an undetermined amount of riparian water users acreage.
- c An additional 178,064 acre-feet of water was pumped from wells.
- d Of this acreage, 19,909 was double cropped.
- e An additional 91,600 acre-feet of water was pumped from wells.
- f Of this acreage, 8,971 was double cropped.

- g An additional 7,569 acre-feet of water was pumped from wells.
- h Of this acreage, 110 was double cropped.
- i Of this acreage, 275 was double cropped.
- j Of this acreage, 486 was double cropped.
- k This acreage also received 13,435 acre-feet of water from wells and controlled drainage.
- m This acreage also received an undetermined amount of well water, and an undetermined amount of controlled drainage water from Oakdale Irrigation District. Of this acreage, 3,198 was double cropped. Includes 1,446 acres served by subirrigation.

TABLE 6-8

IMPORTS AND EXPORTS
October 1963 through September 1964

WATER USER													TOTAL
	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	
<u>Delta-Mendota Canal</u>													
Total acre-feet	120464	28269	6308	30968	86744	127819	174438	187220	213385	269882	247272	133305	1626074
Average cubic feet per second	1959	475	103	504	1508	2079	2932	3045	3586	4399	4021	2240	2240
Monthly use in percent of seasonal	7.4	1.7	0.4	1.9	5.3	7.9	10.7	11.5	13.1	16.6	15.2	8.2	
<u>City and County of San Francisco</u>													
Total acre-feet	10255	7476	3457	12319	13961	15981	15324	16121	15560	16185	16236	15713	158588
Average cubic feet per second	167	126	56	200	243	260	258	262	261	263	264	264	219
Monthly use in percent of seasonal	6.5	4.7	2.2	7.8	8.8	10.1	9.7	10.2	9.8	10.2	10.2	9.9	
<u>Imports from Delta</u>													
<u>Exports from Tuolumne River</u>													

TABLE 8-9

DELIVERIES FROM CENTRAL VALLEY PROJECT CANALS*
October 1963 through September 1964

WATER USER	MILE POST FROM CANAL HEAD		MONTHLY DELIVERIES IN ACRE-FEET												TOTAL
	FROM	TO	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	
Delta-Mendota Canal															
State of California (South Bay Aqueduct)	3.54		2301	487	382	1277	1040	1315	621	2808	2986	2754	2348	2537	20856
Plain View Water District	8.50	20.00	615	33	6	7	424	1492	2523	2802	2317	3677	3523	1739	19158
West Side Irrigation District	14.78		0	0	0	0	0	0	219	286	0	999	578	2	2084
Banta-Carbona Irrigation District	20.42		0	0	0	0	0	0	962	1476	776	3752	5707	1317	13990
Hospital Water District	18.05	30.96	544	53	116	30	683	2762	3513	3838	4234	4696	4580	2617	27666
West Stanislaus Irrigation District	31.31		0	0	0	0	0	1322	8703	3210	4022	11895	10578	3349	43079
Kern Canon Water District	31.31	35.18	372	4	0	1	130	826	1699	772	812	1548	1275	598	8037
Del Puerto Water District	35.73	42.08	228	22	22	95	507	1865	1828	1028	2002	2105	1884	863	12449
Patterson Water District	42.51		249	0	28	30	0	993	684	646	922	501	1021	587	5661
Salado Water District	42.10	46.83	14	0	0	0	0	662	2371	1280	1380	2125	1573	800	10205
Sunflower Water District	44.23	52.02	108	99	0	0	253	1185	2335	1456	1647	2750	2105	546	12484
Orestimba Water District	46.83	51.41	110	0	2	0	226	819	3344	1179	1462	2770	1537	371	11820
Foothill Water District	51.65	57.46	342	0	0	1	412	848	1169	1677	1584	2016	1757	1178	10984
Davis Water District	53.60	56.82	206	1	0	0	214	71	539	360	385	758	435	206	3175
Luhr and Wendt			6	1	0	0	0	0	0	0	0	0	0	0	7
Mustang Water District	56.80	62.67	136	0	0	0	209	882	921	1655	1029	2055	1791	792	9470
Quinto Water District	63.96	67.55	252	0	0	0	409	865	940	732	752	1107	1064	768	6889
Romero Water District	66.70	68.03	104	33	0	0	101	420	138	168	41	119	178	105	1407
San Luis Water District	69.21	90.53	1683	1578	2407	3802	6866	9354	6625	8260	11101	12958	9993	4148	78775
Grasslands Water District	70.00		9633	4773	0	0	0	0	472	1097	922	1094	244	2501	20736
Grasslands Water District (a)	Pool		22501	7311	0	0	0	0	0	0	0	0	0	6819	36631
Morrison-Knudsen			13	3	1	1	1	5	6	5	2	7	5	1	50
State Fish and Game	70.00		0	0	0	0	0	0	0	0	0	0	0	0	0
Sam Hamburg Farms	90.53		2	1	1	1	1	2	2	3	2	4	0	3	22
Panoche Water District	93.25	96.70	1462	1062	1650	4760	10198	7492	4587	6699	9220	13151	10912	1508	72701
Eagle Field Water District	93.27	94.57	191	0	318	352	719	233	724	620	467	815	1167	572	6178
Oro Loma Water District	95.50	96.62	0	0	0	0	0	52	595	1113	942	1141	1028	212	5083
Westside Golf Association	95.95		11	3	5	2	6	8	14	19	21	26	20	14	149
McNamara-Mannix			62	41	26	34	50	74	67	0	157	51	101	98	761
Mercy Springs Water District	97.70	99.82	302	7	128	0	38	447	107	1164	1185	1115	1081	297	5871
Mercy Springs (a)	Pool		0	0	0	0	0	0	0	0	0	0	0	0	0
Widren Water District	102.03		0	0	0	0	79	0	170	542	363	427	396	0	1977
Broadview Water District	102.95		291	433	158	1507	2952	2276	1642	1499	2752	3102	2276	55	18943
McNamara Corp. of California			0	0	0	0	0	0	0	0	0	13	33	14	60
San Luis Water District (Temp. M & I)			0	0	0	0	0	0	0	9	25	27	39	19	119
Western Contracting Corp.			0	0	0	0	0	0	0	0	0	0	0	63	63
Total			41738	15945	5250	11900	25518	36270	47520	46403	53510	79558	69229	34699	467540
Net Deliveries, DMC to Mendota Pool			66062	19946	0	17449	59516	86206	119855	130885	144565	168974	161806	90470	1065734
Millerton Lake															
Fresno County Water District #18			5	2	2	1	3	3	7	12	19	23	18	12	107
Ralston Associates			1	0	0	1	1	0	1	2	4	2	1	1	14
Total			6	2	2	2	4	3	8	14	23	25	19	13	121
Madera Canal															
Madera Irrigation District	6.10	32.2	9965	492	0	0	0	16378	0	5133	30018	43151	20325	0	125462
Adobe Ranch	20.6		0	0	0	0	0	0	0	0	0	0	43	89	132
Chowchilla Water District	35.9		0	0	0	0	0	11776	0	0	17542	29739	28896	7192	95145
Total			9965	492	0	0	0	28154	0	5133	47560	72890	49264	7281	220739

TABLE 8-9 (Cont.)

DELIVERIES FROM CENTRAL VALLEY PROJECT CANALS*
October 1963 through September 1964

WATER USER	MILE POST FROM CANAL HEAD		MONTHLY DELIVERIES IN ACRE-FEET												TOTAL
	FROM	TO	OCT.	NOV	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	
							Friant-Kern Canal								
Garfield Water District	7.53		110	122	168	0	278	46	200	430	512	547	488	298	3199
International Water District	14.9		61	58	0	0	0	21	0	103	151	210	84	27	715
Round Mountain Water District	20.85 21.33		15	0	0	0	0	0	0	0	0	0	0	0	15
Round Mountain Ranch	20.22		4	0	0	0	4	0	6	0	5	11	7	4	41
Consolidated Irrigation District	28.50		10084	1674	0	0	1533	0	0	0	0	0	0	0	13291
Last Chance Water Ditch Company	28.50		0	0	0	0	0	0	0	0	0	0	0	0	0
Laguna Irrigation District	28.50		0	0	0	0	0	0	0	0	0	0	0	0	0
Corcoran Irrigation District	28.50		3618	0	0	0	4701	0	0	0	0	0	0	0	8319
Stratford Irrigation District	28.50		0	0	0	0	0	0	0	0	0	0	0	0	0
Tulare Lake Basin Water Storage District	28.50 & 95.64		0	0	0	0	0	0	0	0	0	0	0	0	0
Alta Irrigation District	28.50		0	0	0	0	0	0	0	0	0	0	0	0	0
Fresno Irrigation District	28.50		0	0	0	0	0	0	0	0	0	0	0	0	0
Riverdale Irrigation District	28.50		0	0	0	0	0	0	0	0	0	0	0	0	0
Kings River Water Association	28.50		9001	0	0	0	0	0	0	0	0	0	0	0	9001
Westside Irrigation District	28.50		0	0	0	0	0	0	0	0	0	0	0	0	0
Kings County Water District	28.50 71.29		1855	145	0	0	3273	0	0	0	0	0	0	0	5273
Orange Cove Irrigation District	35.87 53.31		1063	474	0	0	0	2140	1571	3400	5847	7436	7266	3667	32864
City of Orange Cove	43.44		14	4	0	0	1	21	25	37	44	45	38	22	251
Stone Corral Irrigation District	56.90 64.40		238	131	0	0	353	393	101	694	1382	1870	1910	881	7953
Ivanhoe Irrigation District	65.04 68.13		1339	547	0	0	0	373	212	621	968	2475	2694	1607	10836
Tulare Irrigation District	68.14 71.29		13307	0	0	0	16927	0	0	0	15755	27581	21918	0	95488
Lakeside Irrigation Water District	69.42		0	0	0	0	0	0	0	0	0	0	0	0	0
Kaweah-Delta Water Conservation District	69.08 71.29		10249	0	0	0	0	0	0	0	0	0	0	0	10249
Exeter Irrigation District	72.52 79.24		938	422	0	0	1938	944	996	2053	2491	2803	3205	1827	17617
Lindsay-Strathmore Irrigation District	85.56		1396	686	0	0	984	770	1454	3047	4312	5066	5125	4017	26857
Lindmore Irrigation District	86.17 91.12		1628	563	0	0	3414	2039	2267	3170	5954	7611	7569	5125	39340
Porterville Irrigation District	93.93 98.62		916	321	0	0	1065	1845	1267	1384	2577	3983	4263	1863	19484
Lower Tule Irrigation District	95.67 98.62		20008	7549	0	0	18960	12984	0	0	18587	32270	33777	7561	151696
Tea Pot Dome	99.35		194	34	0	0	133	147	329	458	682	783	815	603	4178
Saucelito Irrigation District	98.62 107.37		1623	375	0	0	3408	4848	1632	1045	4044	4949	5772	2061	29757
Cloer Commercial Service District	101.60		0	0	0	0	0	0	0	0	0	0	0	0	0
Terra Bella Irrigation District	102.65		662	91	0	0	298	452	1004	1525	2317	2761	2755	1853	13718
Pixley Irrigation District	102.69		4510	2372	0	0	6016	0	0	0	0	0	0	0	12898
Delano-Earlimart Irrigation District	109.48 118.45		5272	4873	179	0	16406	19920	9416	7801	20551	22211	18671	7156	132456
Rag Gulch Water District	117.96		377	262	0	0	946	0	0	0	0	0	0	0	1585
Southern San Joaquin Municipal Utility District	117.44 127.97		3683	1422	32	0	8188	19849	8674	7222	16967	21586	20150	7178	114951
Shafter-Wasco Irrigation District	134.42 137.17		1164	692	301	0	3511	8220	3306	3796	8880	11340	9441	3598	54249
Pacific Gas and Electric Company	150.83		0	405	877	0	0	0	0	0	0	0	0	0	1282
Rosedale Rio Bravo Water Storage District	151.0		0	0	0	0	0	0	0	0	0	0	0	0	0
Buena Vista Water Storage District	151.80		0	0	0	0	0	0	0	0	0	0	0	0	0
Total			93329	23222	1557	0	92337	75012	32460	36786	112026	155538	145948	49348	817563

* Data furnished by the U. S. Bureau of Reclamation.

a Delta-Mendota Canal water delivered via Delta-Mendota Pool.

b Includes water transported from Wutchumna Ditch.

APPENDIX C
GROUND WATER MEASUREMENTS



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(Plates C-7 and C-8 are in pocket)

INTRODUCTION

This appendix presents ground water measurement data for the period July 1, 1963, through June 30, 1964.

The area for which ground water level measurements of selected wells are shown on Table C-1 is designated as Area 4 on page iii. Area IV is that portion of the Water Pollution Control Board Region 5, which includes the Stanislaus River drainage area and the area south, to the Tehachapi Mountains.

The Department cooperates with U. S. Geological Survey and the U. S. Bureau of Reclamation and many local agencies for the systematic observation of ground water levels. Wells for which water level measurements are collected in the San Joaquin Valley Hydrologic area number approximately 7,500 of which nearly 600 are presented here. These 600 wells were selected as representative wells of all the wells measured in the area, and are designated as selected wells. These wells were selected on the basis of a number of factors such as areal distribution; length of water level record; frequency of measurements; conformity with respect to water level fluctuations in the ground water basin or area, in a confined aquifer, or in a zone of shallow depth; and availability of a log, mineral analyses, and production records.

The depth to water in most wells is usually a direct measurement made with a tape; however, in some wells, especially deep ones, measurements are made with an air line and gage or an electric sounder.

Forty-eight districts or areas in the San Joaquin Valley are shown on Plates C-1 and C-2.

The districts or areas with a ground water level change of five feet or more in the unconfined and semiconfined aquifers are also shown on Plate C-1. The districts or areas with a ground water level change of five feet or more in the confined and semiconfined aquifers are shown on Plate C-2.

A map showing the location of the selected wells as listed in Table C-1 and cooperative program areas is presented on Plate C-3.

A map of 19 ground water areas and profiles along a section showing water levels in 1921, 1951, 1963, and 1964 are presented on Plate C-4.

Unit hydrographs depicting the fluctuation of average water levels in the 19 ground water areas in the San Joaquin Valley are presented on Plate C-5.

Water level fluctuations are depicted graphically on hydrographs for 35 selected wells distributed among significant districts and areas in the San Joaquin Valley. The hydrographs are presented on Plate C-6 by region, basin, or area, and well number.

Presented on Plate C-7 is a map showing lines of equal elevation of water in wells, unconfined aquifers, San Joaquin Valley, spring 1964.

Presented on Plate C-8 is a map showing lines of equal elevation of water in wells, pressure surface, spring 1964.

Definitions

Free ground water is water in the interconnected interstices in the zone of saturation down to the impervious barrier, moving under the control of the water-table slope.

Water table is the upper surface of the body of free water which completely fills all openings in the material sufficiently pervious to permit percolation. On fractured impervious rocks and in solution openings, it is the surface at the contact between the water body in the openings and the overlying ground air.

Confined ground water is a body of ground water overlain by material sufficiently impervious to sever free hydraulic connections with overlying ground water except at the intake. Confined water moves in conduits under pressure due to difference in head between intake and discharge areas of the confined water body.

Semiconfined ground water occurs when the vertical movement is at a slower rate than the horizontal movement so as to cause differences in head between aquifers during periods of heavy pumping, but when during periods of little draft, the water level recovers to a level coincident with the water table. These aquifers are subject to pressure effects for short periods but the artesian head adjusts to equilibrium with the water table over long periods of time.

Pressure surface or piezometric surface is the level to which the water level will rise above the bottom of a confining bed of impervious material when penetrated.

Perched ground water is ground water occurring in a saturated zone separated from the main body of ground water by unsaturated material.

Explanation of Headings and Symbols Used in Columns in Appendix C

State well number used in this report is based on the township, range, and section subdivision of the Public Land Survey. It conforms to the system used in all ground water investigations and for numbering all wells for which data are published or filed by the Department of Water Resources. In this report the number, which is assigned to a well in accordance with this system, is referred to as the "state well number".

Under the system, each section is divided into 40-acre tracts lettered as follows:

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

Wells are numbered within each 40-acre tract according to the chronological sequence in which they have been assigned state well numbers. For example, a well which has the number 16S/15E-17K1 M would be in Township 16 South, Range 15 East, Section 17, M.D.B. & M., and would be further located as the first well assigned a state well number in Tract K. In this report, well numbers are referenced to the Mount Diablo Base and Meridian (M) or the San Bernardino Base and Meridian (S).

Ground surface elevation represents the elevation in feet above mean sea level (U.S.G.S. datum).

Date is the date upon which the depth measurement was made.

Ground surface to water surface in feet is the measured depth in feet from the ground surface to the water surface in the well. Certain of the depth measurements in the column may be followed with an asterisk superscript to indicate a questionable measurement. Depth to ground water measurements may be questionable for such reasons as (a) well being pumped while undergoing measurement, (b) nearby pump in operation, (c) existence of a leaking or wet casing, (d) well having been pumped recently, (e) air gage measurement, (f) recharge operation at well or nearby. The specific reason for any asterisk on any given measurement may be obtained through the San Joaquin District Office of the Department of Water Resources.

Other code symbols used in this column are as follows:

□--No measurement

#--Measurement discontinued

@--Well has been destroyed

The words FLOW and DRY are shown in this column to indicate a flowing or dry well.

The word DISCONTINUED indicates records from this well will no longer be published.

Water surface elevation is the elevation in feet above mean sea level (U.S.G.S. datum) of the water surface in the well. It was derived by machine computation by subtraction of the depth measurement from the reference point elevation.

Agency supplying data represents the code numbers for the agencies supplying water level data. The agency code consists of a five-digit number, the first of which is a region number. Thus, 54200 refers to agency 4200 in Region 5. Because of the limitations of punch-card space, the agency code has been shown as a four-digit number without the region number.

The first digit of the four-digit agency code designates the type of well numbering system used by the agency as follows:

<u>Code</u>	<u>Well Numbering System</u>
4	Local numbers
5	State or U. S. G. S.
6	U. S. B. R.
7	South San Joaquin Irrigation District
8	Kern County Land Company

The last three digits of the agency code are numbers that designate, within specified serial limits, the type of agency from which the data were obtained, as follows:

<u>Code</u>	<u>Type of Agency</u>
000-049	Federal
050-099	State
100-199	County
200-399	Municipal
400-699	District--Water, Irrigation, Conservation, etc.
700-999	Private

In the Central Valley Region, the agency code for districts is further broken down to the geographic areas, as follows:

<u>Code</u>	<u>Area in Central Valley Region</u>
500-599	American River to San Joaquin River
600-699	San Joaquin River to Tehachapi Mountains

In this list of water levels, the agency furnishing the measurement is listed. The agencies and code numbers assigned to them are as follows:

<u>Agency Code</u>	<u>Agency</u>
4200	City of Fresno
4520	Oakdale Irrigation District
4521	Modesto Irrigation District
4524	Turlock Irrigation District
4525	Merced Irrigation District
4636	Consolidated Irrigation District
4637	Alta Irrigation District
4640	Buena Vista Water Storage District

Agency CodeAgency

5000	U. S. Geological Survey
5050	Department of Water Resources
5120	Kern County Surveyor
5529	Poso Soil Conservation District
5631	Fresno Irrigation District
6001*	U. S. Bureau of Reclamation
7518	South San Joaquin Irrigation District
8700	Kern County Land Company

*A large amount of data listed under this agency code has been gathered by irrigation and water districts and compiled by the Bureau of Reclamation for transmittal to the Department of Water Resources.

TABLE C-1

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
CENTRAL VALLEY REGION					
SAN JOAQUIN VALLEY					
TRACY AREA					
			5-22-00		
			5-22-04		
1S/05E-31R02 M	4.0	7-24-63	2.9	1.1	5050
		8-26-63	3.3	0.7	
		9-24-63	3.2	0.8	
		10-25-63	3.4	0.6	
		11-21-63	3.3	0.7	
		12-20-63	3.4	0.6	
		1-27-64	2.6	1.4	
		2-21-64	3.3	0.7	
		3-23-64	2.9	1.1	
		4-24-64	2.9	1.1	
		5-25-64	3.3	0.7	
		6-23-64	3.2	0.8	
2S/05E-15N02 M	32.0	7-24-63	11.8	20.2	5050
		8-26-63	13.0	19.0	
		9-24-63	13.0	19.0	
		10-25-63	11.3	20.7	
		11-21-63	11.8	20.2	
		12-20-63	11.7	20.3	
		1-27-64	10.7	21.3	
		2-21-64	11.2	20.8	
		3-23-64	11.3	20.7	
		4-24-64	12.7	19.3	
		5-25-64	10.4	21.6	
		6-23-64	10.8	21.2	
2S/06E-28J01 M	20.0	7-24-63	4.1	15.9	5050
		8-26-63	4.5	15.5	
		9-24-63	4.5	15.5	
		10-25-63	4.6	15.4	
		11-21-63	5.0	15.0	
		12-20-63	5.6	14.4	
		1-27-64	e		
TRACY AREA					
			5-22-04		
3S/06E-06N01 M	77.2	7-24-63	10.6	66.6	5050
		8-26-63	10.7	66.5	
		9-24-63	9.4	67.8	
		10-25-63	10.0	67.2	
		11-21-63	7.9	69.3	
		12-20-63	8.3	68.9	
		1-27-64	8.0	69.2	
		2-21-64	8.8	68.4	
		3-23-64	10.3	66.9	
		4-24-64	10.8	66.4	
		5-25-64	9.6	67.6	
		6-23-64	9.8	67.4	
OAKDALE IRRIGATION DISTRICT					
			5-22-06		
1S/09E-16J01 M	119.0	7-01-63	58.0	61.0	4520
		8-01-63	58.8	60.2	
		9-03-63	57.7	61.3	
		10-01-63	56.2	62.8	
		11-01-63	54.7	64.3	
		12-02-63	54.7	64.3	
		1-02-64	54.8	64.2	
		2-03-64	54.6	64.4	
		3-03-64	54.8	64.2	
		4-01-64	55.1	63.9	
		5-01-64	57.2	61.8	
		6-02-64	57.4	61.6	
1S/09E-36A01 M	145.0	12-00-63	47.9	97.1	4520
		3-00-64	48.6	96.4	
1S/10E-19L01 M	146.5	7-01-63	51.9	94.6	4520
		8-01-63	51.9	94.6	
		9-03-63	51.5	95.0	
		10-01-63	50.3	96.2	
		11-01-63	49.8	96.7	
		12-02-63	50.0	96.5	
		1-02-64	50.0	96.5	
		2-03-64	50.3	96.2	
		3-03-64	50.2	96.3	
		4-01-64	50.3	96.2	
		5-01-64	50.2	96.3	
		6-02-64	50.4	96.1	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
OAKDALE IRRIGATION DISTRICT					
5-22.06					
1S/10E-28J01 M	193.0	12-01-63 3-01-64	84.7 82.9	108.3 110.1	4520
2S/09E-26F01 M	132.0	7-01-63 8-01-63 9-03-63 10-01-63 11-01-63 12-02-63 1-02-64 2-03-64 3-03-64 4-01-64 5-01-64	□ □ 52.8 53.3 51.4 51.3 51.2 51.3 52.2 53.7 □	79.2 78.7 80.6 80.7 80.8 80.7 79.8 78.3	4520
2S/09E-26F01 M	132.0	6-02-64	□	106.1	4520
2S/10E-04H01 M	185.5	8-01-63 9-03-63 10-01-63 11-01-63 12-02-63 1-02-64 2-03-64 3-03-64 4-01-64 5-01-64 6-02-64	79.4 79.1 78.2 76.5 75.9 75.6 75.6 75.7 76.4 77.2 78.2	106.4 107.3 109.0 109.6 109.9 109.8 109.9 109.1 108.3 107.3	4520
2S/10E-33J01 M	165.0	12-00-63 3-00-64	59.0 59.7	106.0 105.3	4520
2S/11E-29B01 M	218.0	7-01-63 8-01-63 9-03-63 10-01-63 11-01-63 12-02-63 1-02-64 2-03-64 3-03-64 4-01-64 5-01-64 6-02-64	95.3 95.9 96.4 96.2 93.6 92.4 91.5 91.2 91.4 91.7 92.9 93.7	122.7 122.1 121.6 121.8 124.4 125.6 126.5 126.8 126.6 126.3 125.1 124.3	4520
OAKDALE IRRIGATION DISTRICT					
5-22.06					
2S/11E-31N01 M	192.0	12-00-63 3-00-64	77.2 77.8	114.8 114.2	4520
2S/12E-31K01 M	190.0	12-00-63 3-00-64	43.1 43.0	146.9 147.0	4520
3S/10E-15A01 M	152.0	7-01-63 8-01-63 9-03-63 10-01-63 11-01-63 12-02-63 1-02-64 2-03-64 3-03-64 4-01-64 5-01-64 6-02-64	□ 54.3 55.4 □ □ 49.7 48.8 48.4 48.3 49.1 □ □	97.7 96.6 102.3 103.2 103.6 103.7 102.9	4520
3S/11E-18D01 M	162.0	12-02-63 3-01-64	55.7 56.1	106.3 105.9	4520
MODESTO IRRIGATION DISTRICT					
5-22.07					
2S/08E-25P01 M	97.2	3-00-64	37.4	59.8	4521
2S/09E-31G01 M	100.3	3-00-64	37.0	63.3	4521
3S/08E-22C01 M	64.0	7-08-63 8-05-63 9-04-63 10-02-63 11-05-63 12-04-63 1-07-64 2-04-64 3-03-64 4-02-64 5-05-64 6-08-64	16.7 16.1 17.4 17.3 15.3 14.2 14.1 13.9 14.3 19.3 19.8 19.7	47.3 47.9 46.6 46.7 48.7 49.8 49.9 50.1 49.7 44.7 44.2 44.3	5050

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
MODESTO IRRIGATION DISTRICT					
5-22-07					
3S/08E-22C02 M	64.0	7-08-63	13.7	50.3	5050
		8-05-63	13.3	50.7	
		9-04-63	15.1	48.9	
		10-02-63	15.6	48.4	
		11-05-63	13.9	50.1	
		12-04-63	12.6	51.4	
		1-07-64	12.9	51.1	
		2-04-64	12.7	51.3	
		3-02-64	12.7	51.3	
		4-02-64	12.8	51.2	
		5-05-64	12.9	51.1	
		6-08-64	13.1	50.9	
3S/08E-24C01 M	74.0	3-00-64	20.9	53.1	4521
3S/09E-05N01 M	92.5	3-00-64	23.9	68.6	4521
3S/09E-21A02 M	99.2	3-00-64	37.0	62.2	4521
3S/09E-30P01 M	82.5	3-00-64	36.5	46.0	4521
3S/10E-06G01 M	133.1	3-00-64	35.5	97.6	4521
3S/10E-29K01 M	119.2	3-00-64	47.0	72.2	4521
3S/10E-32G01 M	123.0	3-00-64	58.0	65.0	4521
4S/08E-03E01 M	63.0	3-00-64	15.3	47.7	4521
TURLOCK IRRIGATION DISTRICT					
5-22-08					
4S/08E-27D01 M	55.0	7-03-63	8.9	46.1	4524
		8-05-63	8.2	46.8	
		9-06-63	6.9	48.1	
		10-03-63	6.1	48.9	
		11-04-63	7.4	47.6	
		12-04-63	8.3	46.7	
		1-03-64	9.0	46.0	
		2-05-64	10.0	45.0	
		3-04-64	10.4	44.6	
		4-06-64	9.3	45.7	
4S/09E-21A02 M	82.0	12-04-63	DRY		4524
		3-03-64	DRY		
TURLOCK IRRIGATION DISTRICT					
5-22-08					
4S/10E-21R01 M	109.0	7-03-63	12.9	96.1	4524
		8-05-63	11.5	97.5	
		9-08-63	9.0	100.0	
		10-03-63	7.7	101.3	
		11-04-63	7.1	101.9	
		12-04-63	8.2	100.8	
		1-03-64	8.6	100.4	
		2-05-64	10.0	99.0	
		3-04-64	10.3	98.7	
		4-06-64	10.9	98.1	
4S/10E-21R02 M	109.0	2-00-64	14.0	95.0	4524
4S/11E-29N01 M	131.0	7-02-63	DRY		4524
		12-03-63	DRY		
		4-06-64	DRY		
4S/11E-32P01 M	130.0	2-00-64	22.6	107.4	4524
5S/08E-01N01 M	53.0	7-02-63	5.1	47.9	4524
		8-02-63	6.0	47.0	
		9-05-63	3.5	49.5	
		10-02-63	5.6	47.4	
		11-01-63	6.2	46.8	
		12-03-63	7.0	46.0	
		1-02-64	7.5	45.5	
		2-05-64	7.3	45.7	
		3-03-64	7.5	45.5	
5S/08E-02R01 M	50.0	2-00-64	9.7	40.3	4524
5S/09E-04A01 M	70.0	7-08-63	6.0	64.0	5050
		8-05-63	4.7	65.3	
		9-04-63	5.0	65.0	
		10-02-63	5.2	64.8	
		11-05-63	4.0	66.0	
		12-04-63	4.6	65.4	
		1-02-64	7.0	63.0	
		2-04-64	7.1	62.9	
		3-02-64	7.9	62.1	
		4-02-64	6.9	63.1	
		5-05-64	5.6	64.4	
		6-08-64	8.2	61.8	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
TURLOCK IRRIGATION DISTRICT					
5-22-08					
5S/09E-14R01 M	75.0	7-02-63	6.7	68.3	4524
		8-02-63	5.4	69.6	
		9-05-63	6.0	69.0	
		10-02-63	5.7	69.3	
		11-01-63	6.5	68.5	
		12-03-63	7.2	67.8	
		1-02-64	7.6	67.4	
		2-04-64	7.3	67.7	
		3-02-64	7.6	67.4	
		4-03-64	8.0	67.0	
5S/09E-22N01 M	63.0	2-00-64	7.7	55.3	4524
5S/09E-24N01 M	75.0	7-02-63	4.7	70.3	4524
		8-02-63	5.9	69.1	
		9-05-63	6.6	68.4	
		10-02-63	6.1	68.9	
		11-01-63	6.4	68.6	
		12-03-63	6.5	68.5	
		1-02-64	6.6	68.4	
		2-04-64	5.8	69.2	
		3-02-64	6.4	68.6	
		4-03-64	6.3	68.7	
5S/10E-21Q01 M	90.0	2-00-64	8.9	81.1	4524
5S/10E-21R01 M	92.0	7-01-63	7.5	84.5	4524
		8-01-63	8.2	83.8	
		9-04-63	9.0	83.0	
		10-01-63	9.7	82.3	
		10-31-63	9.2	82.8	
		12-02-63	8.3	83.7	
		12-31-63	8.0	84.0	
		2-04-64	7.6	84.4	
		3-01-64	8.2	83.8	
		4-02-64	8.5	83.5	
5S/11E-21N01 M	125.0	4-01-63	6.8	118.2	4524
		5-01-63	7.2	117.8	
		6-03-63	7.0	118.0	
		7-01-63	6.8	118.2	
		8-01-63	6.3	118.7	
		9-04-63	7.1	117.9	
		10-01-63	7.2	117.8	
		10-31-63	7.1	117.9	
		12-02-63	7.4	117.6	
TURLOCK IRRIGATION DISTRICT					
5-22-08					
5S/11E-21N01 M	125.0	12-31-63	7.9	117.1	4524
		2-03-64	8.5	116.5	
		3-01-64	9.0	116.0	
		4-02-64	7.4	117.6	
5S/11E-29F01 M	120.0	2-00-64	10.1	109.9	4524
5S/12E-31N01 M	150.0	3-05-63	DRY		4524
		6-04-63	DRY		
		7-02-63	12.7	137.3	
		8-02-63	DRY		
		10-02-63	DRY		
		11-01-63	15.0	135.0	
		12-03-63	15.0	135.0	
		1-02-64	14.8	135.2	
		2-05-64	14.7	135.3	
		3-03-64	DRY		
		4-03-64	DRY		
6S/09E-15R01 M	60.0	4-02-63	3.2	56.8	4524
		5-02-63	3.8	56.2	
		6-04-63	3.0	57.0	
		7-02-63	2.4	57.6	
		8-02-63	3.8	56.2	
		9-05-63	2.2	57.8	
		10-02-63	2.9	57.1	
		11-01-63	4.8	55.2	
		12-03-63	5.9	54.1	
		1-02-64	6.4	53.6	
		2-04-64	6.1	53.9	
		3-02-64	6.3	53.7	
		4-03-64	5.2	54.8	
6S/10E-21A01 M	87.0	4-01-63	5.3	81.7	4524
		5-01-63	6.0	81.0	
		6-03-63	5.1	81.9	
		7-01-63	4.2	82.8	
		8-01-63	4.2	82.8	
		9-04-63	3.3	83.7	
		10-01-63	3.5	83.5	
		10-31-63	3.4	83.6	
		12-02-63	3.5	83.5	
		12-31-63	3.0	84.0	
		2-04-64	4.1	82.9	
		3-01-64	3.9	83.1	
		4-02-64	3.5	83.5	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
TURLOCK IRRIGATION DISTRICT					
6S/10E-21N01 M	84.0	2-00-64	5-22.08		4524
6S/11E-08R01 M	115.0	4-01-63	13.5	101.5	4524
		5-01-63	13.7	101.3	
		6-03-63	13.5	101.5	
		7-01-63	12.1	102.9	
		8-01-63	11.4	103.6	
		9-04-63	11.0	104.0	
		10-01-63	10.9	104.1	
		10-31-63	10.3	104.7	
		12-02-63	11.4	103.6	
		12-31-63	11.2	103.8	
		2-03-64	12.8	102.2	
		3-01-64	14.0	101.0	
		4-02-64	DRY		
6S/11E-09N01 M	118.0	1-03-63	7.9	110.1	4524
		2-01-63	7.6	110.4	
		3-05-63	6.5	111.5	
		4-02-63	6.8	111.2	
		5-02-63	6.6	111.4	
		6-04-63	6.4	111.6	
		7-02-63	5.4	112.6	
		8-02-63	5.4	112.2	
		9-05-63	5.8	113.1	
		10-02-63	4.9	110.9	
		11-01-63	7.1	110.6	
		12-03-63	7.4	110.5	
		1-02-64	7.5	111.0	
		2-04-64	7.0	110.4	
		3-03-64	7.6	111.2	
		4-03-64	6.8		
MERCED IRRIGATION DISTRICT					
6S/12E-21N01 M	143.8	7-31-63	15.9	127.9	4525
		9-06-63	15.6	128.2	
		9-30-63	14.7	129.1	
		11-04-63	14.4	129.4	
		12-02-63	14.7	129.1	
		1-06-64	15.0	128.8	
		1-30-64	15.0	128.8	
		3-02-64	15.3	128.5	
		4-07-64	15.6	128.2	
		4-28-64	15.8	128.0	
		6-01-64	16.0	127.8	
		6-29-64	DRY		
MERCED IRRIGATION DISTRICT					
6S/13E-19N01 M	180.7	7-31-63	5-22.09	167.2	4525
		9-06-63	13.5	166.1	
		9-30-63	14.6	165.5	
		11-04-63	15.7	165.0	
		12-02-63	16.6	164.1	
		1-06-64	17.1	163.6	
		1-30-64	DRY		
		3-02-64	DRY		
		4-07-64	DRY		
		4-28-64	DRY		
		6-01-64	DRY		
		6-29-64	12.4	168.3	
6S/14E-32N01 M	178.1	7-01-63	11.9	166.2	4525
		8-05-63	11.5	166.6	
		9-09-63	12.2	165.9	
		10-01-63	12.7	165.4	
		11-06-63	9.9	168.2	
		12-03-63	13.4	164.7	
		1-07-64	13.2	164.9	
		1-29-64	13.6	164.5	
		3-04-64	15.7	162.4	
		4-08-64	14.7	163.4	
		4-29-64	14.0	164.1	
		6-02-64	13.3	164.8	
7S/10E-01N01 M	90.7	7-31-63	DRY		4525
		3-03-64	11.2	79.5	
7S/11E-01H01 M	118.0	7-02-63	10.0	108.0	5050
		8-05-63	10.0	108.0	
		9-03-63	10.4	107.6	
		10-04-63	10.6	107.4	
		11-05-63	9.1	108.9	
		12-04-63	9.4	108.6	
		1-02-64	9.6	108.4	
		2-05-64	9.6	108.4	
		3-02-64	10.0	108.0	
		4-02-64	10.8	107.2	
		5-04-64	11.0	107.0	
		6-04-64	12.2	105.8	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
MERCED IRRIGATION DISTRICT					
5-22.09					
7S/11E-13N01 M	106.6	7-01-63	8.7	97.9	4525
		7-31-63	9.1	97.5	
		9-06-63	9.2	97.4	
		10-01-63	8.4	98.2	
		11-05-63	5.7	100.9	
		12-02-63	5.2	101.4	
		1-06-64	4.8	101.8	
		1-30-64	4.9	101.7	
		3-02-64	5.6	101.0	
		4-08-64	8.3	98.3	
		4-28-64	7.6	99.0	
		6-01-64	8.4	98.2	
		6-29-64	8.5	98.1	
7S/12E-12R01 M	147.3	7-31-63	12.2	135.1	4525
		9-04-63	14.4	132.9	
		9-30-63	13.9	133.4	
		11-05-63	13.8	133.5	
		12-02-63	13.8	133.5	
		1-06-64	13.7	133.6	
		1-28-64	13.6	133.7	
		3-02-64	13.6	133.7	
		4-07-64	15.0	132.3	
		4-28-64	15.4	131.9	
		6-01-64	16.2	131.1	
		6-29-64	16.2	131.1	
7S/13E-16N01 M	152.1	7-31-63	15.2	136.9	4525
		9-05-63	11.2	140.9	
		9-30-63	14.6	137.5	
		11-04-63	10.7	141.4	
		12-02-63	11.4	140.7	
		1-06-64	11.8	140.3	
		1-28-64	12.0	140.1	
		3-02-64	12.5	139.6	
		4-07-64	16.7	135.4	
		4-28-64	16.7	135.4	
		6-01-64	17.6	134.5	
		6-29-64	18.4	133.7	
7S/14E-16R01 M	187.5	7-01-63	5.1	182.4	4525
		8-01-63	4.1	183.4	
		9-01-63	4.8	182.7	
		10-01-63	4.9	182.6	
		11-06-63	9.3	178.2	
		12-03-63	10.9	176.6	
MERCED IRRIGATION DISTRICT					
5-22.09					
7S/14E-16R1 M	187.5	1-07-64	11.7	175.8	4525
		1-29-64	12.3	175.2	
		3-04-64	14.1	173.4	
		4-08-64	13.8	173.7	
		4-29-64	7.7	179.8	
		6-02-64	4.5	183.0	
7S/15E-36N01 M	234.2	8-01-63	DRY		4525
		9-09-63	DRY		
		10-01-63	DRY		
		11-07-63	DRY		
		12-04-63	DRY		
		1-09-64	DRY		
		1-29-64	DRY		
		3-04-64	DRY		
		4-08-64	DRY		
		4-28-64	DRY		
		6-02-64	DRY		
		6-30-64	DRY		
8S/12E-01D01 M	120.2	7-31-63	5.1	115.1	4525
		9-06-63	4.4	115.8	
		11-06-63	6.3	113.9	
		12-02-63	6.5	113.7	
		1-07-64	7.3	112.9	
		1-28-64	7.2	113.0	
		3-03-64	11.1	109.1	
		4-07-64	5.6	114.6	
		4-29-64	5.2	115.0	
		6-01-64	4.0	116.2	
		6-30-64	3.9	116.3	
8S/13E-09R01 M	135.0	8-01-63	2.8	132.2	4525
		9-06-63	1.8	133.2	
		9-30-63	3.2	131.8	
		11-06-63	5.2	129.8	
		12-09-63	5.6	129.4	
		1-07-64	5.2	129.8	
		1-28-64	5.4	129.6	
		3-03-64	5.7	129.3	
		4-07-64	6.7	128.3	
		5-29-64	3.3	131.7	
		6-01-64	2.1	132.9	
		6-30-64	2.5	132.5	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
MERCED IRRIGATION DISTRICT					
8S/14E-01A01 M	196.8	8-01-63 9-06-63 9-30-63 11-07-63 12-01-63 1-08-64 1-28-64 3-04-64 4-07-64 4-28-64 6-01-64 6-30-64	11.8 9.5 12.0 9.8 10.2 10.8 11.0 11.8 12.6 12.2 12.2 11.0	185.0 187.3 184.8 187.0 186.6 186.0 185.8 185.0 184.2 184.6 184.6 185.8	4525
EL NIDO IRRIGATION DISTRICT					
9S/13E-14R01 M	133.0	2-10-64	76.5	57.0	6001
9S/14E-20B01 M	152.0	2-10-64	62.4	87.6	6001
DELTA-MENDOTA AREA					
2S/04E-16H01 M	78.0	9-24-63 3-03-64	5.5 7.0	72.5 71.0	6001
2S/04E-25J01 M	80.4	9-25-63 3-03-64	20.3 25.0	60.1 55.4	6001
2S/04E-28A01 M	187.0	9-24-63 3-03-64	128.1 128.3	58.9 58.7	6001
2S/05E-32A01 M	76.0	9-25-63 3-06-64	21.6 22.0	54.4 54.0	6001
3S/05E-08R01 M	195.7	9-25-63 3-06-64	128.4 126.4	67.3 69.3	6001
3S/05E-08R02 M	195.7	9-25-63 3-06-64	131.7 □	64.0	6001
3S/05E-25Q01 M	207.0	9-26-63 3-10-64	120.0 120.5	87.0 86.5	6001
3S/05E-26K01 M	212.1	9-26-63 3-10-64	126.3 127.9	85.8 84.2	6001
DELTA-MENDOTA AREA					
3S/06E-16Q01 M	80.0	9-27-63 3-13-64	88.2 61.5	- 18.5	6001
3S/06E-18N01 M	99.3	9-26-63 3-09-64	13.3 14.7	86.0 84.6	6001
3S/06E-25D01 M	63.5	9-27-63 3-13-64	□ 23.0	40.5	6001
4S/06E-04H01 M	163.3	9-24-63 3-16-64	122.7 □	40.6	6001
4S/06E-09R01 M	166.3	9-24-63 3-10-64	137.7 118.8	28.6 47.5	6001
4S/07E-27M01 M	68.0	9-26-63 3-26-64	24.8 26.4	43.2 41.6	6001
4S/07E-31D01 M	185.4	9-25-63 3-11-64	110.6 117.6	74.8 67.8	6001
5S/07E-05D01 M	157.4	10-07-63 3-25-64	84.6 78.2	72.8 79.2	6001
5S/07E-13K01 M	107.0	10-07-63 4-07-64	61.0 63.3	46.0 43.7	6001
5S/07E-14D01 M	130.4	10-07-63 4-10-64	75.6 78.4	54.8 52.0	6001
5S/08E-06K01 M	58.7	3-29-64	20.0	38.7	6001
5S/08E-35H01 M	50.0	7-01-63	#		5050
6S/07E-12P01 M	248.3	9-26-63 3-06-64	18.4 13.1	229.9 235.2	5050
6S/08E-12L01 M	64.3	9-27-63 3-29-64	□ 21.8	42.5	5050 6001
6S/08E-16M01 M	129.5	9-26-63 3-09-64	89.2 80.4	40.3 49.1	5050
6S/08E-27J01 M	114.5	9-27-63 3-10-64	50.7 52.5	63.8 62.0	5050

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
DELTA-MENDOTA AREA					
6S/08E-29J01 M	190.0	9-26-63 3-09-64	123.2 118.4	66.8 71.6	5050
7S/08E-22L01 M	127.9	9-30-63 3-11-64	49.8 □	78.1	5050
7S/09E-04R01 M	65.6	9-30-63 3-11-64	16.7 17.8	48.9 47.8	5050
7S/09E-26N01 M	68.4	9-30-63 3-13-64	7.5 6.2	60.9 62.2	5050
8S/08E-01N01 M	123.2	9-30-63 3-11-64	18.3 24.2	104.9 99.0	5050
8S/08E-15J01 M	172.8	10-01-63 3-10-64	73.0 58.6	99.8 114.2	5050
8S/09E-26H01 M	75.0	10-08-63 3-13-64	47.4 21.4	27.6 53.6	5050
8S/09E-26H03 M	75.0	10-08-63 3-13-64	7.7 3.9	67.3 71.1	5050
8S/10E-21L04 M	75.0	10-08-63 3-13-64	8.8 3.8	66.2 71.2	5050
9S/08E-13D01 M	201.6	10-04-63 3-10-64	27.5 □	174.1	5050
9S/09E-18N01 M	153.6	10-04-63 3-18-64	32.6 35.1	121.0 118.5	5050
9S/09E-23L01 M	100.0	10-10-63 3-10-64	63.7 55.9	36.3 44.1	5050
9S/10E-19B01 M	84.0	10-09-63 3-19-64	3.2 4.7	80.8 79.3	5050
9S/10E-23J01 M	87.0	10-09-63 3-19-64	50.2 53.2	36.8 33.8	5050
9S/11E-16H01 M	91.0	10-15-63 3-20-64	8.5 6.6	82.5 84.4	5050
DELTA-MENDOTA AREA					
9S/11E-20J01 M	90.5	10-15-63 3-20-64	46.9 44.6	43.6 45.9	5050
10S/09E-06A01 M	147.0	10-10-63 3-16-64	8.9 □	138.1	5050
10S/09E-08B01 M	167.0	10-10-63 3-16-64	83.3 77.7	83.7 89.3	5050
10S/10E-02R01 M	99.5	10-15-63 3-17-64	19.9 20.9	79.6 78.6	5050
10S/10E-11R01 M	106.6	10-15-63 3-17-64	19.9 22.0	86.7 84.6	5050
10S/10E-31G01 M	191.1	10-14-63 3-17-64	160.1 □	31.0	5050
10S/11E-23D01 M	99.0	10-08-63 3-13-64	5.9 6.6	93.1 92.4	5050
10S/11E-27E02 M	101.3	10-08-63 3-13-64	73.0 60.2	28.3 41.1	5050
11S/10E-11J01 M	157.3	10-10-63 3-11-64	55.8 □	101.5	5050
11S/10E-22Q01 M	246.8	10-15-63 3-11-64	140.4 136.8	106.4 110.0	5050
11S/11E-02J02 M	106.0	10-09-63 3-13-64	2.4 1.5	103.6 104.5	5050
11S/11E-22K01 M	114.2	10-15-63 3-06-64	3.6 2.2	110.6 112.0	5050
11S/11E-22Q03 M	119.0	10-15-63 3-06-64	13.0 7.8	106.0 111.2	5050
11S/12E-31C01 M	132.0	10-09-63 3-06-64	28.9 28.6	103.1 103.4	5050
12S/12E-04D01 M	138.0	10-02-63 12-26-63 4-08-64	3.5 □ 4.8	134.5 5050 133.2	6001 5050 6001

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
DELTA-MENDOTA AREA					
5-22.11					
12S/12E-16M05 M	168.0	7-16-63	129.7	38.3	5000
		8-13-63	130.1	37.9	
		9-11-63	130.6	37.4	
		10-09-63	131.2	36.8	
		11-04-63	131.2	36.8	
		12-05-63	130.6	37.4	
		1-07-64	125.6	42.4	
		2-07-64	125.6	42.4	
		3-05-64	125.6	42.4	
		3-30-64	125.9	42.1	
		4-29-64	126.2	41.8	
		6-23-64	131.3	36.7	
12S/12E-25D01 M	177.0	10-02-63	65.4	111.6	6001
		12-26-63	63.1	113.9	5050
		4-08-64	65.8	111.2	6001
12S/12E-25D02 M	177.0	10-02-63	12.8	164.2	6001
		4-08-64	12.1	164.9	
12S/13E-10N01 M	144.0	10-03-63	DRY	137.7	6001
		12-27-63	6.3		5050
		4-08-64	DRY		6001
12S/14E-30C01 M	154.0	10-03-63	26.3	127.7	6001
		12-27-63	22.4	131.6	5050
		4-07-64	26.4	127.6	6001
CHOWCHILLA WATER DISTRICT					
5-22.12					
9S/14E-25R01 M	185.0	10-31-63	78.1	106.9	6001
		2-10-64	63.0	122.0	
9S/15E-22R02 M	216.5	7-24-63	111.1	105.4	6001
		8-27-63	120.2	96.3	
		10-01-63	110.4	106.1	
		10-23-63	107.5	109.0	
		12-06-63	100.8	115.7	
		12-23-63	94.0	122.5	
		1-22-64	77.0	139.5	
		2-11-64	77.0	139.5	
		3-27-64	92.2	124.3	
		4-24-64	101.6	114.9	
		5-21-64	□		
		6-26-64	□		
CHOWCHILLA WATER DISTRICT					
5-22.12					
9S/15E-25J02 M	232.0	11-04-63	47.2	184.8	6001
		2-10-64	46.9	185.1	
9S/15E-33B01 M	208.0	7-24-63	41.9	166.1	6001
		8-27-63	55.6	152.4	
		10-01-63	58.3	149.7	
		10-23-63	59.0	149.0	
		12-06-63	59.8	148.2	
		12-23-63	60.0	148.0	
		1-22-64	58.3	149.7	
		2-12-64	62.2	145.8	
		3-27-64	56.5	151.5	
		4-24-64	56.5	151.5	
		5-21-64	62.6	145.4	
		6-26-64	59.6	148.4	
9S/16E-22R01 M	267.0	7-24-63	43.0	224.0	6001
		8-28-63	43.2	223.8	
		10-01-63	43.3	223.7	
		10-23-63	42.3	224.7	
		12-06-63	42.1	224.9	
		12-23-63	42.2	224.8	
		1-22-64	42.8	224.2	
		2-11-64	43.1	223.9	
		3-27-64	44.3	222.7	
		4-24-64	45.2	221.8	
		5-21-64	46.1	220.9	
		6-26-64	47.3	219.7	
9S/17E-21L01 M	320.0	10-01-63	98.7	221.3	6001
		2-11-64	96.5	223.5	
9S/17E-35J01 M	320.0	10-01-63	77.4	242.6	6001
		2-11-64	78.0	242.0	
9S/18E-33Q01 M	365.0	9-30-63	□		6001
		2-11-64	53.4	311.6	
10S/14E-08B03 M	150.0	7-24-63	77.7	72.3	6001
		8-28-63	82.0	68.0	
		10-01-63	88.9	61.1	
		10-23-63	75.5	74.5	
		12-06-63	79.7	79.7	
		12-24-63	68.5	81.5	
		1-22-64	66.9	83.1	
		2-12-64	66.6	83.4	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
CHOWCHILLA WATER DISTRICT					
5-22.12					
10S/14E-08B03 M CONT.	150.0	3-27-64	72.5	77.5	6001
		4-24-64	73.1	76.9	
		5-21-64	77.1	72.9	
		6-26-64	84.1	65.9	
10S/15E-23K01 M	194.0	10-30-63	81.1	112.9	6001
		2-12-64	64.8	129.2	
10S/15E-27D03 M	183.0	7-24-63	76.6	106.4	6001
		8-27-63	□		
		10-01-63	82.5	100.5	
		10-23-63	73.1	109.9	
		12-06-63	78.1	104.9	
		12-24-63	68.5	114.5	
		1-22-64	68.5	114.5	
		2-12-64	74.0	109.0	
		3-27-64	70.6	112.4	
		4-24-64	78.2	104.8	
		5-21-64	□		
		6-26-64	80.1	102.9	
10S/16E-09E01 M	232.0	7-24-63	83.3	148.7	6001
		8-28-63	97.1	134.9	
		10-01-63	85.0	147.0	
		10-23-63	81.1	150.9	
		12-06-63	76.3	155.7	
		12-23-63	71.5	160.5	
		1-22-64	70.1	161.9	
		2-12-64	69.6	162.4	
		3-27-64	76.2	155.8	
		4-24-64	□		
		5-21-64	□		
		6-26-64	□		
10S/16E-29R01 M	209.5	10-29-63	81.8	127.7	6001
		2-11-64	75.5	134.0	
MADERA IRRIGATION DISTRICT					
5-22.13					
10S/18E-20R01 M	326.0	9-30-63	62.7	263.3	6001
		2-11-64	67.0	259.0	
10S/19E-16D01 M	387.0	9-30-63	21.4	365.6	6001
		2-10-64	23.3	363.7	

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
MADERA IRRIGATION DISTRICT					
5-22.13					
11S/16E-08A01 M	196.0	7-24-63	72.9	123.1	6001
		8-27-63	73.7	122.3	
		10-01-63	75.4	120.6	
		10-23-63	70.4	125.6	
		11-16-63	67.7	128.3	
		12-23-63	66.0	130.0	
		1-21-64	65.0	131.0	
		2-12-64	64.1	131.9	
		3-26-64	67.2	128.8	
		4-24-64	68.9	127.1	
11S/16E-10N01 M	205.0	5-21-64	70.5	125.5	
		6-25-64	72.8	123.2	
		7-24-63	72.2	132.8	
		8-27-63	71.1	133.9	
		10-01-63	68.2	136.8	
		10-23-63	66.7	138.3	
		12-06-63	64.6	140.4	
		12-23-63	64.0	141.0	
		1-21-64	62.8	142.2	
		2-12-64	62.1	142.9	
		3-26-64	66.2	138.8	
		4-24-64	67.0	138.0	
		5-20-64	70.3	134.7	
		6-25-64	73.3	131.7	
11S/17E-27C01 M	250.6	12-16-63	72.6	178.0	6001
		2-17-64	73.7	176.9	
11S/18E-20N01 M	274.4	12-03-63	□		6001
		2-14-64	72.9	201.5	
11S/18E-27M01 M	284.0	7-24-63	81.2	202.8	6001
		8-28-63	81.7	202.3	
		9-30-63	81.6	202.4	
		10-24-63	82.4	201.6	
		12-06-63	82.4	201.6	
		12-24-63	84.4	199.6	
		1-22-64	80.2	203.8	
		2-10-64	79.3	204.7	
		3-27-64	80.5	203.5	
		4-23-64	81.5	202.5	
		5-20-64	□		
		6-25-64	81.2	202.8	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
MADERA IRRIGATION DISTRICT					
5-22.13					
11S/20E-22M01 M	416.0	9-30-63 2-12-64	109.5 128.0	306.5 288.0	6001
12S/16E-23A01 M	205.4	12-10-63 2-11-64 2-14-64	69.9 67.3 □	135.5 138.1	6001
12S/17E-08G01 M	229.0	7-23-63 8-28-63 10-01-63 10-24-63 12-05-63 12-23-63 1-21-64 2-11-64 3-26-64 4-23-64 5-20-64 6-25-64	86.2 87.5 84.2 81.6 77.6 76.5 75.1 74.6 78.8 79.6 81.6 84.5	142.8 141.5 144.8 147.4 151.4 152.5 153.9 154.4 150.2 149.4 147.4 144.5	6001
MADERA IRRIGATION DISTRICT					
5-22.13					
12S/17E-26C01 M	235.0	5-20-64 6-25-64	64.5 65.8	170.5 169.2	6001
12S/17E-34R01 M	235.0	7-23-63 8-27-63 10-01-63 10-24-63 12-05-63 12-23-63 1-21-64 2-11-64 3-26-64 4-23-64 5-20-64 6-25-64	65.3 63.2 59.1 68.6 54.8 53.8 53.2 54.5 58.3 □ 64.2 65.3	169.7 171.8 175.9 166.4 180.2 181.2 181.8 180.5 176.7 170.8 169.7	6001
12S/18E-13R01 M	288.0	7-23-63 8-27-63 9-30-63 10-24-63 12-05-63 12-23-63 1-21-64 2-11-64 3-26-64 4-23-64 5-20-64 6-25-64	80.8 83.0 79.5 79.1 78.2 76.5 77.5 77.5 80.5 80.0 82.1 84.1	207.2 205.0 208.5 208.9 209.8 211.5 210.5 210.5 207.5 208.0 205.9 203.9	6001
12S/18E-21G01 M	265.0	12-13-63 2-17-64	76.8 72.9	188.2 192.1	6001
12S/18E-21H01 M	265.0	7-23-63 8-27-63 10-01-63 10-24-63 12-05-63 12-23-63 1-21-64 2-11-64 3-26-64 4-23-64 5-20-64 6-25-64	78.6 78.8 78.0 77.0 75.4 74.9 74.0 73.3 74.3 75.1 76.7 78.7	186.4 186.2 187.0 188.0 189.6 190.1 191.0 191.7 190.7 189.9 188.3 186.3	6001
12S/19E-28A01 M	307.0	2-12-64 2-13-64	83.0 84.0	224.0 223.0	6001
MADERA IRRIGATION DISTRICT					
5-22.13					
12S/17E-20P01 M	218.0	7-23-63 8-28-63 10-01-63 10-25-63 12-05-63 12-23-63 1-21-64 2-11-64 3-26-64 4-23-64 5-20-64 6-25-64	94.5 86.5 77.8 72.9 68.2 69.0 73.7 75.0 □ □ □ □	123.5 131.5 140.2 145.1 149.8 149.0 144.3 143.0	6001
12S/17E-21H01 M	228.0	12-13-63 2-14-64	66.0 □	162.0	6001
12S/17E-26C01 M	235.0	7-23-63 8-27-63 10-01-63 10-24-63 12-05-63 12-23-63 1-21-64 2-11-64 3-26-64 4-23-64	66.6 65.4 62.8 63.3 60.0 59.0 58.5 60.8 63.6 64.7	168.4 169.6 172.2 171.7 175.0 176.0 176.5 174.2 171.4 170.3	6001

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
WEST CHOWCHILLA-MADERA AREA					
5-22.14					
10S/13E-14M01 M	120.5	10-02-63	#		6001
10S/13E-22R01 M	119.0	10-02-63 2-12-64	19.9 20.4	99.1 98.6	6001
10S/14E-01R01 M	177.0	10-31-63 2-13-64	79.9 65.1	97.1 111.9	6001
10S/14E-31H01 M	131.0	7-24-63 8-28-63 10-01-63 10-23-63 12-06-63 12-24-63 1-22-64 2-13-64 3-27-64 4-24-64 5-21-64 6-26-64	19.8 21.2 22.7 25.6 25.0 25.0 25.9 27.8 26.3 27.8 29.0 29.8	111.2 109.8 108.3 105.4 106.0 106.0 105.1 103.2 104.7 103.2 102.0 101.2	6001
10S/14E-34H01 M	148.0	7-24-63 8-28-63 10-01-63 10-23-63 12-06-63 12-24-63 1-22-64 1-23-64	49.8 57.3 58.9 DRY 59.8 56.6 58.6 #	98.2 90.7 89.1 88.2 91.4 89.4	6001
10S/14E-35F01 M	151.0	2-13-64 3-27-64 4-24-64 5-21-64 6-26-64	58.4 69.0 # #	92.6 82.0	6001
11S/14E-33L01 M	135.0	7-23-63 8-28-63 10-03-63 10-23-63 12-05-63 12-23-63 1-21-64 1-13-64 3-26-64 4-24-64 5-20-64 6-26-64	18.4 # 16.8 14.2 12.7 12.6 11.6 13.2 # # #	116.6 118.2 120.8 122.3 122.4 123.4 121.8	6001
WEST CHOWCHILLA-MADERA AREA					
5-22.14					
11S/15E-33E01 M	158.0	10-03-63 2-14-64	# #		6001
11S/15E-33P01 M	160.0	7-24-63 8-28-63 10-03-63 10-23-63 12-05-63 12-23-63 1-21-64 2-14-64 3-26-64 4-24-64 5-20-64 6-25-64	38.5 39.5 38.8 37.5 28.1 28.0 35.1 30.4 33.8 47.5 41.0	121.5 120.5 121.2 122.5 131.9 132.0 131.8 124.9 129.6 126.2 112.5 119.0	6001
12S/14E-25H01 M	150.0	7-23-63 8-28-63 10-03-63 10-23-63 12-05-63 12-23-63 1-21-64 2-14-64 3-26-64 4-23-64 5-20-64 6-25-64	15.0 # 13.8 11.5 8.8 11.0 13.0 19.0 14.2 16.3 # #	135.0 136.2 138.5 141.2 139.0 137.0 131.0 135.8 133.7	6001
12S/14E-28G01 M	145.0	10-03-63	#		6001
12S/15E-14L01 M	165.1	10-03-63 2-14-64	41.3 38.3	123.8 126.8	6001
13S/16E-02C01 M	195.0	7-23-63 8-27-63 10-01-63 10-25-63 12-05-63 12-23-63 1-21-64 2-11-64 3-26-64 4-23-64 5-20-64 6-25-64	80.5 81.8 80.0 66.0 58.9 58.5 55.5 54.5 61.8 58.1 66.2 77.0	114.5 113.2 115.0 129.0 136.1 136.5 139.5 140.5 133.2 136.9 128.8 118.0	6001

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
FRESNO IRRIGATION DISTRICT					
5-22-15					
12S/20E-14A01 M	360.0	7-22-63 8-26-63 10-03-63 10-24-63 12-04-63 12-23-63 12-23-63 1-20-64 2-13-64 3-25-64 4-22-64 5-19-64 6-24-64	97.3 97.6 97.0 98.0 101.7 102.9 102.9 95.1 98.7 95.7 106.7 101.4 108.2	262.7 262.4 263.0 262.0 258.3 257.1 264.9 261.3 264.3 253.3 258.6 251.8	6001
12S/21E-34D01 M	387.7	7-31-63 8-27-63 9-30-63 10-28-63 11-27-63 12-31-63 1-28-64 3-05-64 4-29-64 5-28-64 6-29-64	58.3 57.7 58.1 56.7 55.4 54.5 53.6 53.7 56.2 55.6 58.1	329.4 330.0 329.6 331.0 332.3 333.2 334.1 334.0 331.5 332.1 329.6	5631
12S/22E-21E01 M	473.0	10-04-63 2-13-64	26.7 17.9	446.3 455.1	6001
13S/17E-22B01 M	220.8	7-29-63 8-28-63 9-26-63 10-26-63 11-29-63 12-28-63 1-30-64 3-05-64 3-26-64 4-29-64 5-28-64 6-29-64	42.6 38.7 37.4 44.9 38.9 39.1 40.3 40.3 42.2 40.4 40.2	178.2 182.1 183.4 175.9 181.9 181.7 180.5 178.6 180.4 180.6	5631
13S/17E-33D01 M	212.0	7-22-63 8-26-63 10-02-63 10-25-63 12-04-63 12-23-63 1-20-64 2-11-64 3-25-64 4-28-64 5-19-64	57.0 53.0 52.3 57.0 49.0 51.3 51.0 49.5 50.0 52.7 56.2	155.0 159.0 159.7 155.0 163.0 160.7 161.0 162.5 162.0 159.3 155.8	6001
FRESNO IRRIGATION DISTRICT					
5-22-15					
13S/17E-33D01 M	212.0	6-24-64	58.0	154.0	6001
13S/18E-10P01 M	258.0	7-22-63 8-26-63 10-02-63 10-25-63 12-04-63 12-23-63 1-20-64 2-12-64 3-25-64 4-22-64 5-19-64 6-24-64	54.2 51.9 53.5 55.8 54.2 52.9 52.8 52.2 56.7 56.5 53.5	203.8 206.1 204.5 202.2 203.8 205.1 205.2 205.8 201.3 201.5 204.5	6001
13S/18E-16D01 M	255.8	10-15-63 2-12-64	53.5 57.0	202.3 198.8	6001
13S/18E-34D01 M	245.0	7-22-63 8-26-63 10-02-63 10-25-63 12-04-63 12-23-63 1-20-64 2-11-64 3-25-64 4-22-64 5-19-64 6-24-64	62.2 63.5 59.6 60.4 58.8 60.0 58.5 58.7 63.0 65.1 62.0 63.2	182.8 181.5 185.4 184.6 186.2 185.0 186.5 186.3 182.0 179.9 183.0 181.8	6001
13S/19E-09Q01 M	288.2	7-29-63 8-28-63 9-26-63 10-26-63 12-02-63 12-27-63 1-30-64 2-12-64 3-05-64 3-27-64 4-28-64 5-28-64 6-29-64	66.0 65.5 65.5 65.0 65.5 66.4 66.2 65.4 66.1 62.8 65.3 69.2 70.9	222.2 222.7 222.7 223.2 222.7 221.8 222.0 222.8 222.1 225.4 222.9 219.0 217.3	5631
13S/19E-16K01 M	290.0	7-22-63	73.8	216.2	6001

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
FRESNO IRRIGATION DISTRICT					
5-22.15					
13S/19E-16K01 M	290.0	8-26-63	73.8	216.2	6001
CONT.		10-03-63	73.1	216.9	
		10-25-63	75.5	214.5	
		12-04-63	73.2	216.8	
		12-23-63	73.0	217.0	
		1-20-64	72.8	217.2	
		2-12-64	72.6	217.4	
		3-25-64	72.5	217.5	
		4-22-64	75.0	215.0	
		5-19-64	74.5	215.5	
		6-24-64	74.1	215.9	
13S/20E-02L01 M	336.7	7-31-63	84.8	251.9	5631
		8-27-63	83.9	252.8	
		9-30-63	83.3	253.4	
		10-28-63	81.4	255.3	
		11-27-63	78.1	258.6	
		12-30-63	78.3	258.4	
		1-27-64	78.6	258.1	
		3-05-64	78.4	258.3	
		3-26-64	82.4	254.3	
		4-28-64	79.6	257.1	
		5-28-64	80.0	256.7	
		6-29-64	78.9	257.8	
		7-31-63	36.2	327.8	
		8-29-63	29.1	334.9	
		9-30-63	30.1	333.9	
		10-28-63	28.9	335.1	
		11-29-63	28.8	335.2	
13S/21E-23D01 M	364.0	12-31-63	31.9	332.1	5631
		1-28-64	28.2	335.8	
		3-05-64	□		
		3-27-64	□		
		4-28-64	□		
		5-28-64	29.5	334.5	
		6-29-64	30.9	333.1	
13S/23E-31P01 M	406.5	7-30-63	33.3	373.2	5631
		8-30-63	33.4	373.1	
		9-30-63	33.3	373.2	
		10-30-63	32.7	373.8	
		11-27-63	30.7	375.8	
		12-30-63	30.6	375.9	
		1-30-64	30.2	376.3	
		7-30-63	33.3	373.2	
		8-30-63	33.4	373.1	
		9-30-63	33.3	373.2	
		10-30-63	32.7	373.8	

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
FRESNO IRRIGATION DISTRICT					
5-22.15					
13S/23E-31P01 M	406.5	2-30-64	30.2	376.3	5631
CONT.		3-30-64	30.3	376.2	
		4-30-64	30.8	375.7	
		5-30-64	30.8	375.7	
		6-29-64	31.0	375.5	
14S/17E-13H02 M	215.0	7-23-63	#		6001
CONT.		7-29-63	68.0	159.4	
		8-28-63	71.3	156.1	
		9-26-63	70.3	157.1	
		10-29-63	62.8	164.6	
		11-30-63	62.7	164.7	
		12-28-63	61.1	166.3	
		1-30-64	67.0	160.4	
		3-05-64	60.6	166.8	
		3-26-64	71.0	156.4	
		4-28-64	□		
		5-29-64	74.2	153.2	
		6-30-64	□		
14S/19E-20B01 M	247.2	7-30-63	55.8	191.4	5631
		8-29-63	52.1	195.1	
		9-27-63	57.6	189.6	
		10-29-63	51.8	195.4	
		11-30-63	53.0	194.2	
		12-30-63	54.9	192.3	
		1-27-64	52.8	194.4	
		3-05-64	54.6	192.6	
		3-26-64	51.4	195.8	
		4-28-64	52.7	194.5	
		5-29-64	52.2	195.0	
		6-30-64	52.7	194.5	
		7-30-63	68.6	213.9	5631
		8-28-63	73.3	209.2	
		9-30-63	□		
14S/20E-06H01 M	282.5	10-29-63	72.8	209.7	
		11-30-63	66.5	216.0	
		12-30-63	67.4	215.1	
		1-27-64	65.0	217.5	
		3-05-64	64.4	218.1	
		4-28-64	65.9	216.6	
		5-28-64	74.5	208.0	
		6-30-64	□		
		7-30-63	68.6	213.9	5631
		8-28-63	73.3	209.2	
		9-30-63	□		

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA	STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
FRESNO IRRIGATION DISTRICT						CITY OF FRESNO					
5-22.15						5-22.16					
14S/21E-14A01 M	334.0	7-30-63	43.0	291.0	5631	13S/20E-21J01 M	310.0	12-01-63	83.7	226.3	4200
		8-30-63	45.7	288.3		CONT.					
		9-30-63	45.3	288.7		13S/20E-23B01 M	325.0	7-01-63	85.4	239.6	4200
		10-30-63	45.0	289.0				8-01-63	88.3	236.7	
		11-30-63	43.3	290.7				9-01-63	88.8	236.2	
		12-31-63	42.5	291.5				10-01-63	88.6	236.4	
		1-28-64	42.1	291.9				11-01-63	87.1	237.9	
		3-06-64	40.3	293.7				12-01-63	86.0	239.0	
		3-27-64	40.6	293.4				1-01-64	84.6	240.4	
		4-29-64	42.7	291.3				2-01-64	84.1	240.9	
		5-29-64	□					3-01-64	84.5	240.5	
		6-29-64	44.7	289.3				4-01-64	85.7	239.3	
14S/22E-01P01 M	400.0	7-30-63	46.6	353.4	5631			4-29-64	90.5	234.5	
		8-28-63	□					6-05-64	88.6	236.4	
		9-30-63	42.9	357.1		13S/20E-35H02 M	305.3	7-01-63	90.9	214.4	4200
		10-28-63	41.1	358.9				8-01-63	92.6	212.7	
		11-27-63	41.5	358.5				9-01-63	92.9	212.4	
		12-31-63	41.5	358.5				10-01-63	93.3	212.0	
		1-28-64	40.8	359.2				11-01-63	92.2	213.1	
		3-05-64	41.7	358.3				12-01-63	90.8	214.5	
		3-27-64	42.0	358.0				1-01-64	90.0	215.3	
		4-29-64	41.9	358.1				2-01-64	89.9	215.4	
		5-29-64	43.1	356.9				3-01-64	90.7	214.6	
		6-29-64	41.1	358.9				4-01-64	90.7	214.6	
15S/20E-13E02 M	282.5	7-30-63	39.6	242.9	5631			4-30-64	91.6	213.7	
		8-29-63	37.5	245.0		14S/20E-01D01 M	303.9	6-05-64	93.2	212.1	
		9-27-63	40.3	242.2				7-01-63	79.1	224.8	4200
		10-29-63	36.4	246.1				8-01-63	81.6	222.3	
		11-30-63	37.6	244.9				9-01-63	81.7	222.2	
		12-30-63	37.4	245.1				10-01-63	79.2	224.7	
		1-29-64	41.3	241.2				11-01-63	76.8	227.1	
		3-06-64	41.5	241.0				12-01-63	75.0	228.9	
		3-28-64	42.3	240.2				1-01-64	74.0	229.9	
		4-29-64	40.3	242.2				2-01-64	73.1	230.8	
		5-29-64	39.9	242.6				3-01-64	73.0	230.9	
		6-30-64	39.7	242.8				4-01-64	73.3	230.6	
5-22.16								4-30-64	76.1	227.8	
13S/20E-21J01 M	310.0	7-31-63	83.5	226.5	4200			6-04-64	77.7	226.2	
		9-01-63	83.6	226.4		14S/20E-10M01 M	291.4	7-04-63	80.0	211.4	4200
		10-01-63	84.2	225.8				7-31-63	83.7	207.7	
		11-01-63	84.2	225.8				8-28-63	86.4	205.0	
								10-02-63	85.0	206.4	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
CITY OF FRESNO					
5-22.16					
14S/20E-10M01 M CONT.	291.4	10-30-63	82.9	208.5	4200
		12-03-63	77.1	214.3	
		1-06-64	75.8	215.6	
		2-04-64	74.7	216.7	
		3-03-64	74.7	216.7	
		3-31-64	75.1	216.3	
		4-29-64	77.9	213.5	
6-04-64	80.1	211.3			
FRESNO SLOUGH AREA					
5-22.17					
13S/15E-28H01 M 13S/15E-35D02 M	162.0 165.5	10-01-63	42.0	120.0	6001
		2-10-64	40.9	121.1	
		7-22-63	69.0*	96.5	
		8-26-63	70.3*	95.2	
		10-01-63	48.5	117.0	
		10-25-63	39.0	126.5	
		12-04-63	31.6	133.9	
		12-23-63	30.7	134.8	
		1-20-64	32.5	133.0	
		2-10-64	41.0	124.5	
		3-25-64	54.5	111.0	
		4-22-64	54.6	110.9	
		5-19-64	56.0	109.5	
6-24-64	61.5	104.0			
13S/17E-17A01 M	205.0	7-22-63	□		6001
		8-26-63	□		
		10-02-63	18.7	186.3	
		10-25-63	18.2	186.8	
		12-04-63	17.7	187.3	
		12-23-63	18.6	186.4	
		1-20-64	18.0	187.0	
		2-11-64	18.3	186.7	
		3-25-64	18.9	186.1	
		4-22-64	□		
		5-19-64	19.7	185.3	
		6-24-64	20.8	184.2	
14S/15E-25H02 M	160.0	7-23-63	28.9	131.1	6001
		8-26-63	29.4	130.6	
		10-01-63	27.5	132.5	
		10-25-63	25.0	135.0	
		12-04-63	20.2	139.8	
FRESNO SLOUGH AREA					
5-22.17					
14S/20E-10M01 M CONT.	291.4	10-30-63	82.9	208.5	4200
		12-03-63	77.1	214.3	
		1-06-64	75.8	215.6	
		2-04-64	74.7	216.7	
		3-03-64	74.7	216.7	
		3-31-64	75.1	216.3	
		4-29-64	77.9	213.5	
6-04-64	80.1	211.3			
FRESNO SLOUGH AREA					
5-22.17					
14S/15E-25H02 M CONT.	160.0	12-23-63	23.5	136.5	6001
		1-20-64	19.6	140.4	
		2-14-64	26.2	133.8	
		3-25-64	23.6	136.4	
		4-22-64	28.6	131.4	
		5-19-64	28.5	131.5	
		6-24-64	33.0	127.0	
		7-22-63	44.8	135.2	
		8-26-63	43.7	136.3	
		10-04-63	42.0	138.0	
		10-25-63	35.6	144.4	
		12-04-63	32.5	147.5	
		12-23-63	32.6	147.4	
14S/16E-03C01 M	180.0	1-20-64	31.0	149.0	6001
		2-17-64	36.0	144.0	
		3-25-64	36.7	143.3	
		4-22-64	39.5	140.5	
		5-19-64	40.3	139.7	
		6-24-64	□		
		7-22-63	39.0	126.0	
		8-26-63	35.5	129.5	
		10-04-63	38.2	126.8	
		10-25-63	27.6	137.4	
		12-04-63	23.6	141.4	
		12-23-63	23.5	141.5	
		1-20-64	21.8	143.2	
2-17-64	26.8	138.2			
3-25-64	32.8	132.2			
4-22-64	32.1	132.9			
5-19-64	36.0	129.0			
6-24-64	42.2	122.8			
14S/16E-22N01 M	167.0	10-03-63	23.2	143.8	6001
		2-14-64	22.7	144.3	
14S/17E-25A01 M	211.0	10-08-63	□		6001
		2-18-64	77.2	133.8	
15S/16E-01L01 M	171.0	10-03-63	35.2	135.8	6001
		2-10-64	□		
15S/16E-12C03 M	171.0	7-23-63	26.1	144.9	6001
		8-26-63	26.9	144.1	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
FRESNO SLOUGH AREA					
5-22.17					
15S/16E-12C03 M	171.0	10-03-63	25.1	145.9	6001
CONT.		10-25-63	24.5	146.5	
		12-04-63	23.8	147.2	
		12-23-63	24.7	146.3	
		1-20-64	25.1	145.9	
		2-10-64	27.1	143.9	
		3-25-64	25.6	145.4	
		4-22-64	27.3	143.7	
		5-19-64	27.2	143.8	
		6-24-64	27.9	143.1	
		10-02-63	100.0	87.0	6001
15S/17E-22R01 M	187.0	2-10-64	□		6001
CONT.		3-02-64	91.5	95.5	
		7-23-63	100.6	84.4	6001
		8-26-63	101.2	83.8	
		10-02-63	97.1	87.9	
		10-25-63	92.2	92.8	
		12-04-63	81.9	103.1	
		12-23-63	79.9	105.1	
		1-20-64	78.0	107.0	
		2-10-64	95.0	90.0	
		3-25-64	82.9	102.1	
		4-22-64	85.0	100.0	
		5-19-64	85.6	99.4	
		6-24-64	95.8	89.2	
		7-23-63	□		6001
		8-26-63	97.5	106.5	
		10-09-63	102.1	101.9	
		10-25-63	93.6	110.4	
		12-04-63	91.3	112.7	
		12-23-63	89.1	114.9	
		1-20-64	86.6	117.4	
		2-17-64	□		
		3-25-64	98.5	105.5	6001
		4-22-64	□		
		5-19-64	102.0	102.0	
		6-24-64	102.8	101.2	
15S/18E-16G01 M	205.8	10-22-63	93.2	112.6	6001
CONT.		2-10-64	□		6001
		3-03-64	90.8	115.0	
15S/19E-29C01 M	227.3	7-30-63	DRY		5631
FRESNO SLOUGH AREA					
5-22.17					
15S/19E-29C01 M	227.3	8-30-63	□		5631
CONT.		9-30-63	□		
		10-29-63	99.1	128.2	
		11-30-63	96.6	130.7	
		12-30-63	95.6	131.7	
		1-29-64	94.5	132.8	
		3-05-64	96.3	131.0	
		3-26-64	95.0	132.3	
		4-28-64	98.3	129.0	
		5-29-64	104.6	122.7	
		6-29-64	108.2	119.1	
16S/17E-23N01 M	189.0	12-16-63	99.1	89.9	5050
CONT.		2-12-64	125.0	64.0	6001
		9-27-63	94.0	112.0	5050
		10-28-63	88.8	117.2	
		11-27-63	88.0	118.0	
		12-30-63	87.2	118.8	
		2-03-64	87.8	118.2	
		2-24-64	89.9	116.1	
		3-31-64	91.0	115.0	
		4-27-64	92.1	113.9	
		5-25-64	103.0	103.0	
		6-24-64	□		
		7-29-63	□		5050
		8-29-63	□		
		9-27-63	□		
		10-28-63	87.0	118.0	
		11-27-63	85.4	119.6	
		12-30-63	82.5	122.5	
		2-03-64	□		
		2-24-64	#		
16S/18E-10A01 M	205.0	2-07-64	85.9	112.1	5050
CONT.		7-29-63	109.0	82.0	5050
		8-29-63	111.1	79.9	
		9-27-63	104.4	86.6	
		10-28-63	103.6	87.4	
		11-27-63	96.3	94.7	
		12-30-63	95.5	95.5	
		2-03-64	99.8	91.2	
		2-24-64	125.8	65.2	
		7-29-63	109.0	82.0	5050
		8-29-63	111.1	79.9	
16S/18E-31Q02 M	191.0	9-27-63	104.4	86.6	5050
CONT.		10-28-63	103.6	87.4	
		11-27-63	96.3	94.7	
		12-30-63	95.5	95.5	
		2-03-64	99.8	91.2	
		2-24-64	125.8	65.2	
		7-29-63	109.0	82.0	
		8-29-63	111.1	79.9	
		9-27-63	104.4	86.6	
		10-28-63	103.6	87.4	
		11-27-63	96.3	94.7	
		12-30-63	95.5	95.5	
		2-03-64	99.8	91.2	
		2-24-64	125.8	65.2	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA	STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
FRESNO SLOUGH AREA						CONSOLIDATED IRRIGATION DISTRICT					
5-22.17						5-22.18					
16S/18E-31002 M	191.0	3-31-64	114.3	76.7	5050	15S/19E-24N01 M	246.6	1-03-64	70.3	176.3	4636
CONT.		4-27-64	111.3	79.7		CONT.		2-01-64	69.8	176.8	
		5-25-64	100.3	90.7				3-03-64	75.4	171.2	
		6-24-64	99.6	91.4				4-01-64	75.4	171.2	
16S/19E-34P01 M	220.0	7-29-63	□	127.9	5050			4-29-64	78.8	167.8	
		8-29-63	92.1	129.8				5-25-64	79.2	167.4	
		9-27-63	90.2	129.8							
		10-28-63	85.8	134.2				7-01-63	56.9	207.9	4636
		11-27-63	84.9	135.1				7-30-63	57.3	207.5	
		12-30-63	82.5	137.5				8-31-63	53.8	211.0	
		2-03-64	81.6	138.4				10-03-63	52.6	212.2	
		2-24-64	□	133.2				11-01-63	52.0	212.8	
		3-31-64	86.8	133.2				12-03-63	51.6	213.2	
		4-27-64	□	117.0				1-03-64	51.3	213.5	
		5-25-64	103.0	117.0				2-01-64	51.1	213.7	
		6-24-64	96.0	124.0				3-03-64	52.7	212.1	
17S/17E-12H01 M	199.0	12-19-63	120.5	78.5	5050			4-01-64	55.8	209.0	
		2-07-64	152.0*	47.0				4-29-64	56.7	208.1	
17S/18E-23A02 M	199.5	12-19-63	□	126.7	5050			5-25-64	56.9	207.9	
		2-07-64	72.8								
CONSOLIDATED IRRIGATION DISTRICT						CONSOLIDATED IRRIGATION DISTRICT					
5-22.18						5-22.18					
14S/22E-22N01 M	355.7	7-01-63	36.2	319.5	4636	15S/21E-15D01 M	301.2	7-01-63	36.3	264.9	4636
		7-30-63	35.6	320.1				7-30-63	36.7	264.5	
		8-31-63	34.2	321.5				8-31-63	36.0	265.2	
		10-03-63	33.3	322.4				10-03-63	35.1	266.1	
		11-01-63	32.7	323.0				11-01-63	34.3	266.9	
		12-03-63	32.1	323.6				12-03-63	33.6	267.6	
		1-03-64	31.6	324.1				1-03-64	32.9	268.3	
		2-01-64	31.1	324.6				2-01-64	32.6	268.6	
		3-03-64	31.5	324.2				3-03-64	32.6	268.6	
		4-01-64	32.0	323.7				4-01-64	33.2	268.0	
		4-29-64	32.8	322.9				4-29-64	34.2	267.0	
		5-25-64	33.4	322.3				5-25-64	35.1	266.1	
15S/19E-24N01 M	246.6	7-01-63	80.4	166.2	4636	15S/22E-16A01 M	337.0	7-01-63	36.0	301.0	4636
		7-30-63	79.8	166.8				7-30-63	35.5	301.5	
		8-31-63	79.2	167.4				8-31-63	32.9	304.1	
		10-03-63	75.6	171.0				10-03-63	32.4	304.6	
		11-01-63	73.4	173.2				11-01-63	32.4	304.6	
		12-03-63	71.6	175.0				12-03-63	31.8	305.2	
								1-03-64	32.6	304.4	
								2-01-64	32.7	304.3	
								3-03-64	33.3	303.7	
								4-01-64	36.0	301.0	
								4-29-64	36.1	300.9	
								5-25-64	36.6	300.4	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
CONSOLIDATED IRRIGATION DISTRICT 5-22.18					
15S/22E-29D01 M	321.9	7-01-63	40.1	281.8	4636
		7-30-63	39.7	282.2	
		8-31-63	36.8	285.1	
		10-03-63	36.6	285.3	
		11-01-63	36.2	285.7	
		12-03-63	35.7	286.2	
		1-03-64	36.1	285.8	
		2-01-64	35.1	286.8	
		3-03-64	36.6	285.3	
		4-01-64	38.9	283.0	
		4-29-64	39.0	282.9	
		5-25-64	39.8	282.1	
16S/19E-14A01 M	235.5	7-01-63	84.6	150.9	4636
		7-30-63	86.2	149.3	
		8-31-63	83.4	152.1	
		10-03-63	79.5	156.0	
		11-01-63	77.7	157.8	
		12-03-63	76.6	158.9	
		1-03-64	75.5	160.0	
		2-01-64	74.7	160.8	
		3-03-64	77.6	157.9	
		4-01-64	80.6	154.9	
		4-29-64	84.5	151.0	
		5-25-64	86.2	149.3	
16S/20E-22N01 M	247.7	7-01-63	64.0	183.7	4636
		7-30-63	63.5	184.2	
		8-31-63	61.7	186.0	
		10-03-63	60.4	187.3	
		11-01-63	59.5	188.2	
		12-03-63	58.8	188.9	
		1-03-64	58.4	189.3	
		2-01-64	58.0	189.7	
		3-03-64	58.5	189.2	
		4-01-64	60.7	187.0	
		4-29-64	64.7	183.0	
		5-25-64	67.3	180.4	
16S/21E-22N01 M	271.0	7-01-63	52.7	218.3	4636
		7-30-63	52.6	218.4	
		8-31-63	52.1	218.9	
		10-03-63	49.0	222.0	
		11-01-63	45.6	225.4	
		12-03-63	45.0	226.0	
CONSOLIDATED IRRIGATION DISTRICT 5-22.18					
16S/21E-22N01 M	271.0	1-03-64	44.4	226.6	4636
		2-01-64	44.0	227.0	
		3-03-64	46.8	224.2	
		4-01-64	47.9	223.1	
		4-29-64	49.2	221.8	
		5-25-64	50.1	220.9	
16S/22E-23R01 M	297.5	7-01-63	31.2	266.3	4636
		7-30-63	31.2	266.3	
		8-31-63	30.6	266.9	
		10-03-63	29.9	267.6	
		11-01-63	29.4	268.1	
		12-03-63	28.5	269.0	
		1-03-64	28.6	268.9	
		2-01-64	28.4	269.1	
		3-03-64	28.3	269.2	
		4-01-64	28.3	269.2	
		4-29-64	28.4	269.1	
		5-25-64	28.4	269.1	
17S/22E-03C01 M	286.0	7-01-63	25.2	260.8	4636
		7-30-63	23.9	262.1	
		8-31-63	22.1	263.9	
		10-03-63	24.1	261.9	
		11-01-63	24.9	261.1	
		12-03-63	24.7	261.3	
		1-03-64	25.5	260.5	
		2-01-64	25.5	260.5	
		3-03-64	26.8	259.2	
		4-01-64	28.2	257.8	
		4-29-64	31.4	254.6	
		5-22-64	32.2	253.8	
ALTA IRRIGATION DISTRICT 5-22.19					
14S/23E-36R01 M	391.0	7-30-63	51.1	339.9	4637
		9-02-63	45.4	345.6	
		10-02-63	53.7	337.3	
		10-31-63	56.1	334.9	
		11-29-63	54.5	336.5	
		12-30-63	55.5	335.5	
		1-28-64	56.6	334.4	
		2-26-64	59.4	331.6	
		3-27-64	64.2	326.8	
		4-27-64	69.1	321.9	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
ALTA IRRIGATION DISTRICT					
5-22-19					
145/23E-36R01 M	391.0	5-31-64	68.1	322.9	4637
CONT.					
145/24E-31P01 M	395.0	7-30-63	45.6	349.4	4637
		2-06-64	64.9	330.1	6001
		2-26-64	54.0	341.0	4637
155/23E-23A02 M	358.0	7-30-63	52.9	305.1	4637
		9-02-63	48.3	309.7	
		10-02-63	51.7	306.3	
		10-31-63	48.8	309.2	
		11-29-63	48.2	309.8	
		12-30-63	48.0	310.0	
		1-28-64	48.1	309.9	
		2-26-64	48.7	309.3	
		3-27-64	53.3	304.7	
		4-27-64	57.8	300.2	
		5-31-64	60.4	297.6	
		6-29-64	52.9	305.1	
155/24E-22D01 M	388.0	7-29-63	39.2	348.8	4637
		8-31-63	36.3	351.7	
		10-04-63	43.9	344.1	
		11-02-63	45.8	342.2	
		11-30-63	46.0	342.0	
		12-31-63	46.3	341.7	
		1-30-64	46.0	342.0	
		2-28-64	47.7	340.3	
		3-30-64	46.6	341.4	
		4-29-64	49.0	339.0	
		5-29-64	44.9	343.1	
		6-26-64	37.3	350.7	
165/23E-23E01 M	314.0	7-30-63	32.6	281.4	4637
		9-03-63	31.7	282.3	
		10-03-63	29.5	284.5	
		11-01-63	28.9	285.1	
		11-27-63	28.6	285.4	
		12-28-63	28.3	285.7	
		1-29-64	28.2	285.8	
		2-27-64	28.7	285.3	
		3-28-64	30.9	283.1	
		4-28-64	32.8	281.2	
		6-01-64	31.3	282.7	
		6-27-64	31.4	282.6	
165/24E-21J01 M	336.0	7-29-63	37.8	298.2	4637
ALTA IRRIGATION DISTRICT					
5-22-19					
165/24E-21J01 M	336.0	8-27-63	34.3	301.7	4637
CONT.					
		10-01-63	34.6	301.4	
		10-30-63	33.7	302.3	
		11-26-63	33.6	302.4	
		12-27-63	35.4	300.6	
		1-27-64	34.7	301.3	
		2-25-64	33.5	302.5	
		3-26-64	41.8	294.2	
		4-25-64	40.7	295.3	
		5-29-64	43.1	292.9	
		6-25-64	40.8	295.2	
165/25E-29A01 M	364.0	7-29-63	52.1	311.9	4637
		8-27-63	48.1	315.9	
		10-01-63	□	□	
		10-30-63	51.3	312.7	
		11-26-63	50.4	313.6	
		12-27-63	49.2	314.8	
		1-27-64	47.9	316.1	
		2-25-64	□	□	
		3-26-64	56.1	307.9	
		4-25-64	57.6	306.4	
		5-29-64	57.5	306.5	
		6-25-64	53.6	310.4	
175/22E-25A01 M	275.0	7-29-63	□	□	4637
		8-27-63	□	□	
		10-03-63	□	□	
		11-01-63	36.4	238.6	
		11-27-63	34.0	241.0	
		12-28-63	32.1	242.9	
		1-28-64	30.3	244.7	
		2-27-64	32.5	242.5	
		3-30-64	34.6	240.4	
		4-28-64	33.3	241.7	
		6-01-64	40.6	234.4	
		6-27-64	41.5	233.5	
175/22E-25J01 M	275.0	7-31-63	37.4	237.6	4637
		9-03-63	38.4	236.6	
		10-03-63	37.5	237.5	
		11-01-63	35.9	239.1	
		11-27-63	34.1	240.9	
		12-28-63	32.1	242.9	
		1-28-64	30.4	244.6	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA	STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
ALTA IRRIGATION DISTRICT						LOWER KINGS RIVER AREA					
5-22-19						5-22-20					
17S/22E-25J01 M	275.0	2-27-64	31.2	243.8	4637	18S/21E-10R01 M	254.0	12-30-63	55.0	199.0	5050
CONT.		3-30-64	32.8	242.2		CONT.		2-03-64	56.3	197.7	5129
		4-28-64	33.4	241.6				2-12-64	58.7	195.3	5050
		6-01-64	36.2	238.8				2-24-64	65.5	188.5	5129
		6-27-64	37.8	237.2				2-29-64	65.5	188.5	5050
17S/25E-10C01 M	335.0	2-25-64	47.6	287.4	4637			3-31-64	65.5	188.5	5050
17S/25E-18R01 M	321.0	2-26-64	65.3	255.7	4637			4-27-64	73.8	180.2	5129
5-22-20								5-31-64	70.5	183.5	5129
LOWER KINGS RIVER AREA								6-28-64	77.6	176.4	
17S/19E-14J02 M	220.0	2-06-64	63.6	156.4	5050	19S/19E-25A01 M	208.0	2-05-64	2.7	205.3	5050
17S/20E-20D01 M	223.0	7-29-63	63.5	159.5	5050	19S/20E-21A01 M	217.0	7-29-63	69.9	147.1	5050
		8-29-63	63.5	159.5				8-29-63	70.5	146.5	
		9-27-63	96.5*	126.5				9-27-63	70.7	146.3	
		10-28-63	65.2	157.8				10-28-63	75.0	142.0	
		11-27-63	56.6	166.4				11-27-63	69.5	147.5	
		12-30-63	43.4	179.6				12-30-63	69.5	147.5	
		2-03-64	83.1*	139.9		20S/20E-09C01 M	206.0	2-10-64	4.4	201.6	5050
		2-24-64	60.2	162.8		20S/21E-03A01 M	222.0	9-30-63	19.2	202.8	6001
		3-31-64	66.4	156.6				2-05-64	19.3	202.7	5129
		4-27-64	67.4	155.6				7-29-63	30.1	180.9	5050
		5-25-64	71.7	151.3				8-29-63	31.1	179.9	
		6-24-64	75.0	148.0				9-27-63	30.3	180.7	
17S/21E-11G01 M	257.2	7-29-63	44.6	212.6	5050			10-28-63	29.8	181.2	
		8-29-63	44.6	212.6				11-27-63	29.2	181.8	
		9-27-63	41.9*	215.3				12-30-63	29.3	181.7	
		10-28-63	41.9*	215.3				2-03-64	29.2	181.8	
		11-27-63	37.0	220.2				2-24-64	29.7	181.3	
		12-30-63	37.0	220.2				3-31-64	30.9	180.1	
		2-06-64	37.0	220.2				4-27-64	31.1	179.9	
		2-07-64	#					5-25-64	#		
5-22-21						5-22-21					
ORANGE COVE IRRIGATION DISTRICT						ORANGE COVE IRRIGATION DISTRICT					
18S/19E-26E01 M	210.0	2-05-64	5.0	205.0	5050	14S/24E-20B01 M	443.0	7-02-63	14.0	429.0	6001
18S/20E-16A01 M	230.0	2-05-64	7.5	222.5	5050			8-01-63	12.7	430.3	
18S/21E-10R01 M	254.0	7-29-63	72.4	181.6	5050			9-03-63	12.3	430.7	
		8-29-63	72.3	181.7				10-01-63	14.2	428.8	
		9-27-63	67.5	186.5				12-02-63	15.1	427.9	
		10-28-63	61.1	192.9				1-02-64	16.5	426.5	
		11-27-63	61.1	192.9				2-03-64	17.3	425.7	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
ORANGE COVE IRRIGATION DISTRICT 5-22.21					
14S/24E-20801 M	443.0	3-03-64	16.5	426.5	6001
CONT.		4-02-64	15.7	427.3	
		5-01-64	15.6	427.4	
		6-02-64	14.7	428.3	
14S/25E-30001 M	510.0	9-26-63	34.3	475.7	6001
		2-07-64	33.9	476.1	
15S/24E-14001 M	405.0	7-02-63	33.5	371.5	6001
		8-02-63	31.7	373.3	
		9-03-63	28.8	376.2	
		10-01-63	30.9	374.1	
		11-05-63	27.7	377.3	
		12-02-63	27.5	377.5	
		1-03-64	27.4	377.6	
		2-03-64	27.1	377.9	
		3-02-64	26.8	378.2	
		4-02-64	26.8	378.2	
		5-01-64	26.8	378.2	
		6-01-64	26.7	378.3	
16S/25E-04C02 M	415.0	7-03-63	15.7	399.3	6001
		8-02-63	15.5	399.5	
		9-04-63	13.9	401.1	
		10-03-63	14.4	400.6	
		11-05-63	14.5	400.5	
		12-03-63	15.1	399.9	
		1-03-64	15.6	399.4	
		2-03-64	16.8	398.2	
		3-04-64	17.2	397.8	
		4-02-64	17.0	398.0	
		5-04-64	17.1	397.9	
		6-03-64	17.1	397.9	
STONE CORRAL IRRIGATION DISTRICT 5-22.22					
16S/26E-32R01 M	405.0	3-24-64	1.6	403.4	6001
CONT.		4-21-64	1.5	403.5	
		5-19-64	1.7	403.3	
		6-22-64	2.0	403.0	
17S/26E-07R01 M	364.0	7-26-63	15.1	348.9	6001
		8-30-63	14.3	349.7	
		9-27-63	13.0	351.0	
		10-21-63	11.5	352.5	
		12-03-63	10.0	354.0	
		1-24-63	10.5	353.5	
		1-20-64	11.0	353.0	
		2-06-64	11.0	353.0	
		2-25-64	10.0	354.0	
		3-24-64	10.4	353.6	
		4-21-64	10.2	353.8	
		5-19-64	9.1	354.9	
		6-22-64	9.2	354.8	
IVANHOE IRRIGATION DISTRICT 5-22.23					
17S/25E-27R01 M	350.0	7-01-63	□		6001
		8-01-63	□		
		8-31-63	□		
		10-04-63	91.0	259.0	
		11-04-63	89.2	260.8	
		11-29-63	88.0	262.0	
		1-06-64	86.8	263.2	
		1-29-64	86.1	263.9	
		3-02-64	88.7	261.3	
		4-01-64	87.9	262.1	
		4-29-64	88.8	261.2	
		6-02-64	91.5	258.5	
17S/25E-35M01 M	349.0	7-01-63	□		6001
		8-01-63	82.3	266.7	
		8-31-63	82.6	266.4	
		10-04-63	83.1	265.9	
		11-04-63	82.7	266.3	
		11-29-63	82.4	266.6	
		1-06-64	81.7	267.3	
		1-29-64	81.1	267.9	
		3-02-64	80.6	268.4	
		4-01-64	80.6	268.4	
		4-29-64	80.4	268.6	
STONE CORRAL IRRIGATION DISTRICT 5-22.22					
16S/26E-32R01 M	405.0	7-26-63	1.6	403.4	6001
		8-30-63	2.0	403.0	
		9-27-63	2.2	402.8	
		10-21-63	2.0	403.0	
		12-02-63	1.5	403.5	
		12-24-63	1.5	403.5	
		1-20-64	1.6	403.4	
		2-04-64	1.9	403.1	
		2-25-64	2.1	402.9	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
IVANHOE IRRIGATION DISTRICT					
5-22-23					
17S/25E-35M01 M	349.0	6-02-64	□		6001
CONT.					
17S/25E-36G01 M	365.0	7-01-63	76.3	288.7	6001
		8-01-63	□		
		8-31-63	77.3	287.7	
		11-04-63	74.8	290.2	
		11-29-63	74.2	290.8	
		1-06-64	74.8	290.2	
		1-29-64	74.6	290.4	
		3-02-64	80.7	284.3	
		4-01-64	75.5	289.5	
		4-29-64	□		
		6-02-64	□		
17S/26E-21E01 M	394.0	7-01-63	□		6001
		8-01-63	18.8	375.2	
		8-31-63	19.0	375.0	
		10-04-63	18.0	376.0	
		11-04-63	18.0	376.0	
		11-29-63	18.0	376.0	
		1-06-64	19.1	374.9	
		1-29-64	20.2	373.8	
		3-04-64	22.6	371.4	
		4-02-64	20.8	373.2	
		4-30-64	19.3	374.7	
		6-02-64	□		
17S/26E-32N01 M	385.0	7-01-63	□		6001
		8-01-63	70.4	314.6	
		8-31-63	71.0	314.0	
		10-04-63	70.0	315.0	
		11-04-63	69.4	315.6	
		11-29-63	69.1	315.9	
		1-06-64	68.8	316.2	
		1-29-64	67.9	317.1	
		3-04-64	□		
		4-02-64	67.2	317.8	
		4-30-64	□		
		6-02-64	68.0	317.0	
17S/26E-34D01 M	416.0	7-01-63	64.0	352.0	6001
		8-01-63	65.5	350.5	
		8-31-63	64.5	351.5	
		10-04-63	62.5	353.5	
		11-04-63	60.5	355.5	
IVANHOE IRRIGATION DISTRICT					
5-22-23					
17S/26E-34D01 M	416.0	11-29-63	59.0	357.0	6001
CONT.					
		1-06-64	37.6	378.4	
		1-29-64	57.2	358.8	
		3-04-64	59.5	356.5	
		4-01-64	58.9	357.1	
		4-30-64	59.7	356.3	
		6-02-64	61.2	354.8	
18S/25E-12Q01 M	363.0	9-25-63	58.4	304.6	6001
		2-03-64	49.6	313.4	
KAWEAH DELTA WATER CONSERV DIST					
5-22-24					
17S/24E-34B01 M	297.5	7-26-63	18.9	278.6	6001
		8-30-63	23.5	274.0	
		9-27-63	27.5	270.0	
		10-21-63	23.8	273.7	
		12-03-63	24.1	273.4	
		12-24-63	25.2	272.3	
		1-20-64	26.0	271.5	
		2-25-64	29.5	268.0	
		3-24-64	31.8	265.7	
		4-21-64	33.0	264.5	
		5-19-64	33.9	263.6	
		6-22-64	35.1	262.4	
17S/25E-21A01 M	335.0	7-26-63	104.5	230.5	6001
		8-30-63	□		
		9-27-63	99.0	236.0	
		10-21-63	□		
		12-03-63	#		
17S/26E-17P02 M	385.0	9-27-63	16.6	368.4	6001
		2-06-64	16.1	368.9	
17S/27E-34P01 M	470.0	9-27-63	12.0	458.0	6001
		2-07-64	11.5	458.5	
18S/22E-29A01 M	251.0	9-26-63	78.8	172.2	6001
		2-05-64	76.4	174.6	
		2-12-64	76.3	174.7	5129
18S/22E-36P01 M	245.0	7-25-63	91.5	153.5	6001
		8-29-63	94.7	150.3	
		9-24-63	94.9	150.1	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
KAWEAH DELTA WATER CONSERV DIST 5-22-24					
18S/22E-36P01 M	245.0	10-22-63	91.0	154.0	6001
CONT.		12-02-63	83.5	161.5	
		12-23-63	81.4	163.6	
		1-20-64	79.6	165.4	
		2-24-64	82.6	162.4	
		3-23-64	87.8	157.2	
		4-20-64	87.8	157.2	
		5-18-64	90.1	154.9	
		6-23-64	95.7	149.3	
18S/23E-12H01 M	282.5	7-25-63	61.1	221.4	6001
		8-29-63	64.7	217.8	
		9-24-63	64.6	217.9	
		10-21-63	60.7	221.8	
		12-02-63	55.5	227.0	
		12-23-63	54.0	228.5	
		1-20-64	51.9	230.6	
		2-24-64	52.2	230.3	
		3-23-64	56.5	226.0	
		4-20-64	58.2	224.3	
		5-18-64	58.3	224.2	
		6-23-64	61.9	220.6	
18S/23E-34A01 M	271.0	2-05-64	85.5	185.5	5129
18S/24E-26A01 M	312.5	9-24-63	68.5	244.0	6001
		2-04-64	64.1	248.4	
18S/25E-33F01 M	338.0	10-01-63	48.9	289.1	6001
		2-05-64	44.7	293.3	
18S/26E-27E01 M	390.0	9-25-63	21.0	369.0	6001
		2-03-64	18.3	371.7	
18S/26E-30N01 M	367.0	7-26-63	25.7	341.3	6001
		8-30-63	26.3	340.7	
		9-25-63	23.9	343.1	
		10-21-63	22.7	344.3	
		12-02-63	22.1	344.9	
		12-24-63	22.0	345.0	
		1-20-64	21.8	345.2	
		2-24-64	24.6	342.4	
		3-24-64	26.3	340.7	
		4-21-64	26.1	340.9	
		5-19-64	26.2	340.8	
KAWEAH DELTA WATER CONSERV DIST 5-22-24					
18S/26E-30N01 M	367.0	6-23-64	26.0	341.0	6001
CONT.					
19S/22E-01N02 M	245.0	9-27-63	69.3	175.7	6001
		2-05-64	69.2	175.8	
19S/22E-19A01 M	235.0	7-25-63	89.5	145.5	6001
		8-29-63	91.2	143.8	
		9-26-63	91.3	143.7	
		10-22-63	89.3	145.7	
		12-02-63	86.0	149.0	
		12-23-63	84.7	150.3	
		1-20-64	83.7	151.3	
		2-04-64	83.3	151.7	
		2-24-64	86.1	148.9	
		3-23-64	89.8	145.2	
		4-20-64	90.6	144.4	
		5-18-64	92.5	142.5	
		6-23-64	98.5	136.5	
19S/22E-36E01 M	234.0	7-25-63	106.7	127.3	6001
		8-29-63	106.4	127.6	
		9-26-63	106.0	128.0	
		9-30-63	105.5	128.5	
		10-22-63	105.2	128.8	
		12-02-63	103.0	131.0	
		12-23-63	101.6	132.4	
		1-20-64	103.5	130.5	
		2-05-64	99.6	134.4	
		2-24-64	100.0	134.0	
		3-23-64	100.0	134.0	
		4-20-64	101.0	133.0	
		5-18-64	103.0	131.0	
		6-23-64	104.5	129.5	
19S/25E-07K01 M	320.0	7-25-63	39.6	280.4	6001
		8-30-63	39.6	280.4	
		9-24-63	39.5	280.5	
		10-21-63	40.6	279.4	
		12-03-63	45.0	275.0	
		12-24-63	45.7	274.3	
		1-20-64	46.4	273.6	
		2-24-64	48.9	271.1	
		3-23-64	51.8	268.2	
		4-21-64	52.8	267.2	
		5-18-64	53.9	266.1	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
KAWEAH DELTA WATER CONSERV DIST					
5-22-24					
19S/25E-07K01 M	320.0	6-23-64	53.9	266.1	6001
CONT.					
19S/26E-34R02 M	341.0	7-26-63	□		6001
		8-30-63	□		
		9-25-63	113.6	227.4	
		10-21-63	109.3	231.7	
		12-02-63	89.9	251.1	
		12-23-63	87.4	253.6	
		1-20-64	110.0	231.0	
		2-24-64	□		
		3-23-64	105.8	235.2	
		4-20-64	100.0	241.0	
		5-18-64	114.1	226.9	
		6-22-64	□		
20S/22E-10C01 M	226.0	9-30-63	123.1	102.9	6001
		2-05-64	□		5129
20S/25E-14F01 M	304.5	7-25-63	104.8	199.7	6001
		8-29-63	106.7	197.8	
		9-25-63	90.8	213.7	
		10-21-63	85.3	219.2	
		12-02-63	78.5	226.0	
		12-23-63	76.6	227.9	
		1-20-64	75.8	228.7	
		2-24-64	96.2	208.3	
		3-23-64	90.8	213.7	
		4-20-64	89.6	214.9	
		5-18-64	97.1	207.4	
		6-23-64	111.5	193.0	
TULARE IRRIGATION DISTRICT					
5-22-25					
19S/23E-14R01 M	270.0	4-28-64	□		6001
CONT.					
		5-28-64	□		
		6-26-64	□		
19S/23E-32H01 M	250.5	2-05-64	93.7	156.8	6001
		2-17-64	96.8	153.7	5129
19S/24E-16P01 M	290.0	7-25-63	□		6001
		8-29-63	100.3	189.7	
		9-25-63	89.7	200.3	
		10-22-63	83.6	206.4	
		12-02-63	80.3	209.7	
		12-23-63	85.0	205.0	
		1-24-64	79.2	210.8	
		2-10-64	80.0	210.0	
		2-25-64	□		
		3-30-64	86.5	203.5	
		4-28-64	93.4	196.6	
		5-28-64	86.5	203.5	
		6-26-64	□		
19S/24E-27O01 M	290.0	7-25-63	99.4	190.6	6001
		8-29-63	96.0	194.0	
		9-25-63	□		
		10-22-63	85.4	204.6	
		12-02-63	81.9	208.1	
		12-23-63	82.5	207.5	
		1-24-64	81.2	208.8	
		2-25-64	90.5	199.5	
		3-30-64	92.7	197.3	
		4-28-64	92.0	198.0	
		5-28-64	101.0	189.0	
		6-26-64	111.0	179.0	
19S/25E-17J01 M	327.0	7-25-63	61.7	265.3	6001
		8-30-63	58.8	268.2	
		9-24-63	55.0	272.0	
		10-21-63	51.6	275.4	
		12-02-63	50.9	276.1	
		12-24-63	55.0	272.0	
		2-06-64	□		
		3-30-64	55.1	271.9	
		4-21-64	□		
		5-28-64	60.5	266.5	
		6-26-64	□		
TULARE IRRIGATION DISTRICT					
5-22-25					
19S/23E-14R01 M	270.0	7-25-63	□		6001
		8-29-63	101.0	169.0	
		9-25-63	100.0	170.0	
		10-10-63	87.2	182.8	
		10-22-63	95.6	174.4	
		12-02-63	89.9	180.1	
		12-23-63	92.0	178.0	
		2-10-64	82.9	187.1	
		2-25-64	83.5	186.5	
		3-30-64	74.5	195.5	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
TULARE IRRIGATION DISTRICT					
5-22-25			5-22-25		
20S/23E-08B02 M	241.0	7-25-63	126.6	114.4	6001
		8-29-63	126.5	114.5	
		9-26-63	115.8	125.2	
		10-22-63	108.4	132.6	
		12-02-63	104.2	136.8	
		12-23-63	103.0	138.0	
		1-24-64	101.1	139.9	
		2-25-64	102.1	138.9	
		3-30-64	104.5	136.5	
		4-28-64	104.8	136.2	
		5-28-64	116.6	124.4	
		6-26-64	119.5	121.5	
20S/24E-16H01 M	273.0	7-25-63	119.5	153.5	6001
		8-29-63	121.7	151.3	
		9-25-63	101.9	171.1	
		10-21-63	102.3	170.7	
		12-02-63	87.7	185.3	
		12-23-63	92.6	180.4	
		2-07-64	88.1	184.9	
		2-25-64	102.7	170.3	
		3-30-64	110.4	162.6	
		4-28-64	104.6	168.4	
		5-28-64	107.5	165.5	
		6-26-64	127.7	145.3	
20S/24E-30J02 M	250.0	7-25-63	□	□	6001
		8-30-63	□	□	
		9-25-63	112.5	137.5	
		10-21-63	101.9	148.1	
		12-04-63	103.6	146.4	
		12-23-63	104.2	145.8	
		1-24-64	95.1	154.9	
		2-25-64	□	□	
		3-30-64	98.5	151.5	
		4-28-64	□	□	
		5-28-64	98.0	152.0	
		6-26-64	□	□	
21S/23E-05R01 M	222.0	7-26-63	100.6	121.4	6001
		8-30-63	101.6	120.4	
		9-26-63	101.0	121.0	
		10-22-63	100.7	121.3	
		12-04-63	98.9	123.1	
		12-23-63	96.1	125.9	
TULARE IRRIGATION DISTRICT					
5-22-25			5-22-25		
21S/23E-05R01 M	222.0	1-24-64	94.7	127.3	6001
		2-05-64	94.2	127.8	
		2-25-64	95.5	126.5	
		3-30-64	□	□	
		4-28-64	99.0	123.0	
		5-28-64	□	□	
		6-26-64	□	□	
EXETER IRRIGATION DISTRICT					
5-22-26			5-22-26		
18S/26E-25K01 M	436.0	7-26-63	59.4	376.6	6001
		8-30-63	59.3	376.7	
		9-25-63	56.6	379.4	
		10-21-63	55.1	380.9	
		12-02-63	53.5	382.5	
		12-24-63	52.6	383.4	
		1-20-64	52.0	384.0	
		2-24-64	52.1	383.9	
		3-24-64	52.2	383.8	
		4-20-64	52.5	383.5	
		5-19-64	55.6	380.4	
		6-22-64	55.4	380.6	
18S/27E-29D01 M	447.0	7-26-63	36.2	410.8	6001
		8-30-63	30.5	416.5	
		9-25-63	28.0	419.0	
		9-26-63	31.8	415.2	
		10-21-63	32.0	415.0	
		12-02-63	28.4	418.6	
		12-24-63	28.8	418.2	
		1-20-64	28.5	418.5	
		2-07-64	27.7	419.3	
		2-24-64	27.5	419.5	
		3-24-64	27.2	419.8	
		4-20-64	28.3	418.7	
		5-19-64	30.5	416.5	
		6-22-64	□	□	
19S/26E-14E01 M	375.0	7-26-63	103.8	271.2	6001
		8-30-63	101.9	273.1	
		9-25-63	105.5	269.5	
		10-21-63	98.3	276.7	
		12-02-63	97.3	277.7	
		12-24-63	93.0	282.0	
		1-20-64	91.2	283.8	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
EXETER IRRIGATION DISTRICT					
5-22-26					
19S/26E-14E01 M	375.0	2-24-64	90.8	284.2	6001
CONT.		3-23-64	□		
		4-20-64	92.2	282.8	
		5-18-64	96.0	279.0	
		6-22-64	100.4	274.6	
19S/26E-23E01 M	359.0	9-26-63	104.2	254.8	6001
		2-09-64	91.9	267.1	
LINDSAY-STRATHMORE IRRIG DIST					
5-22-27					
19S/27E-29D01 M	385.0	9-23-63	□		6001
		2-04-64	74.6	310.4	
20S/27E-06B01 M	372.0	7-26-63	70.9	301.1	6001
		8-30-63	74.1	297.9	
		9-25-63	64.1	307.9	
		10-16-63	62.1	309.9	
		10-21-63	62.7	309.3	
		12-02-63	61.3	310.7	
		12-23-63	63.5	308.5	
		1-21-64	62.5	309.5	
		2-04-64	64.0	308.0	
		2-24-64	64.1	307.9	
		3-23-64	64.4	307.6	
		4-21-64	64.5	307.5	
		5-18-64	63.9	308.1	
		6-22-64	62.3	309.7	
20S/27E-21F01 M	414.0	9-23-63	□		6001
		2-04-64	□		
20S/27E-29J01 M	406.0	9-23-63	52.7	353.3	6001
		2-04-64	47.2	358.8	
LINDMORE IRRIGATION DISTRICT					
5-22-28					
20S/26E-01P01 M	360.0	7-26-63	98.9	261.1	6001
		8-30-63	□		
		9-25-63	100.6	259.4	
		10-21-63	94.0	266.0	
		12-02-63	93.2	266.8	
		12-23-63	88.0	272.0	
		1-20-64	83.0	277.0	
		2-04-64	92.6	267.4	
LINDMORE IRRIGATION DISTRICT					
5-22-28					
20S/26E-01P01 M	360.0	2-24-64	88.0	272.0	6001
		3-23-64	89.4	270.6	
		4-21-64	89.4	270.6	
		5-18-64	□		
		6-22-64	102.6	257.4	
20S/26E-22C02 M	341.0	9-30-63	123.4	217.6	6001
		2-04-64	107.0	234.0	
20S/26E-24K01 M	362.5	7-25-63	87.5	275.0	6001
		8-29-63	86.0	276.5	
		9-25-63	83.5	279.0	
		10-21-63	80.5	282.0	
		12-02-63	77.5	285.0	
		12-24-63	76.5	286.0	
		1-21-64	76.9	285.6	
		2-24-64	77.9	284.6	
		3-26-64	78.2	284.3	
		4-22-64	78.4	284.1	
		5-19-64	79.9	282.6	
		6-22-64	84.3	278.2	
20S/26E-32A01 M	331.5	7-25-63	137.3	194.2	6001
		8-29-63	140.6	190.9	
		9-25-63	145.8	185.7	
		10-21-63	130.5	201.0	
		12-02-63	115.0	216.5	
		12-24-63	113.0	218.5	
		1-21-64	108.7	222.8	
		2-24-64	115.0	216.5	
		3-25-64	118.6	212.9	
		4-22-64	□		
		5-19-64	126.8	204.7	
		6-22-64	133.5	198.0	
20S/27E-29E01 M	392.0	7-25-63	57.7	334.3	6001
		8-29-63	□		
		9-25-63	56.8	335.2	
		10-21-63	55.3	336.7	
		12-02-63	53.9	338.1	
		12-24-63	53.2	338.8	
		1-21-64	52.9	339.1	
		2-24-64	54.1	337.9	
		3-25-64	54.0	338.0	
		4-22-64	56.2	335.8	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
LINDMORE IRRIGATION DISTRICT					
5-22-28					
20S/27E-29E01 M	392.0	5-19-64	□		6001
CONT.					
		6-22-64	56.9	335.1	
21S/26E-01O01 M	372.0	7-25-63	104.2	267.8	6001
		8-29-63	114.9	257.1	
		9-23-63	93.9	278.1	
		10-21-63	82.1	289.9	
		12-02-63	71.8	300.2	
		12-24-63	73.2	298.8	
		1-21-64	72.7	299.3	
		2-24-64	74.4	297.6	
		3-25-64	91.7	280.3	
		4-22-64	90.3	281.7	
		5-19-64	100.7	271.3	
		6-22-64	107.0	265.0	
21S/27E-02E01 M	429.0	7-25-63	38.2	390.8	6001
		8-29-63	35.3	393.7	
		9-23-63	33.1	395.9	
		10-21-63	35.9	393.1	
		12-02-63	35.3	393.7	
		12-24-63	□		
		1-21-64	36.3	392.7	
		2-24-64	35.4	393.6	
		3-25-64	36.8	392.2	
		4-22-64	36.1	392.9	
		5-19-64	32.4	396.6	
		6-22-64	36.4	392.6	
PORTERVILLE IRRIGATION DISTRICT					
5-22-29					
21S/27E-29E01 M	392.0	5-19-64	□		6001
CONT.					
		6-22-64	56.9	335.1	
21S/26E-01O01 M	372.0	7-25-63	104.2	267.8	6001
		8-29-63	114.9	257.1	
		9-23-63	93.9	278.1	
		10-21-63	82.1	289.9	
		12-02-63	71.8	300.2	
		12-24-63	73.2	298.8	
		1-21-64	72.7	299.3	
		2-24-64	74.4	297.6	
		3-25-64	91.7	280.3	
		4-22-64	90.3	281.7	
		5-19-64	100.7	271.3	
		6-22-64	107.0	265.0	
21S/27E-02E01 M	429.0	7-25-63	38.2	390.8	6001
		8-29-63	35.3	393.7	
		9-23-63	33.1	395.9	
		10-21-63	35.9	393.1	
		12-02-63	35.3	393.7	
		12-24-63	□		
		1-21-64	36.3	392.7	
		2-24-64	35.4	393.6	
		3-25-64	36.8	392.2	
		4-22-64	36.1	392.9	
		5-19-64	32.4	396.6	
		6-22-64	36.4	392.6	
PORTERVILLE IRRIGATION DISTRICT					
5-22-29					
21S/26E-23N01 M	374.0	7-24-63	72.2	301.8	6001
		8-20-63	70.4	303.6	
		9-23-63	70.6	303.4	
		10-21-63	65.5	308.5	
		11-22-63	60.2	313.8	
		12-20-63	58.2	315.8	
		2-04-64	56.0	318.0	
		3-02-64	54.0	320.0	
		3-25-64	56.5	317.5	
		5-23-64	61.0	313.0	
		6-22-64	66.1	307.9	
21S/27E-21E01 M	409.0	7-25-63	47.2	361.8	6001
		8-29-63	48.1	360.9	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
LOWER TULE RIVER IRRIGATION DIST 5-22-30					
21S/23E-22J01 M	221.5	9-24-63 2-06-64	103.3 83.8	118.2 137.7	6001
21S/24E-15H01 M	253.0	9-30-63 2-07-64	□ □		6001
21S/24E-31D01 M	230.0	7-02-63 8-02-63 9-04-63 9-30-63 11-08-63 12-05-63 1-02-64 2-01-64 3-02-64 4-03-64 5-01-64 6-03-64	86.5 85.5 84.5 84.5 83.5 77.5 81.5 82.5 81.5 81.5 81.5 82.3	143.5 144.5 145.5 145.5 146.5 152.5 148.5 147.5 148.5 148.5 148.5 147.7	6001
21S/24E-35M01 M	251.0	7-02-63 8-02-63 9-04-63 9-30-63 11-08-63 12-05-63 1-02-64 2-01-64 3-02-64 4-03-64 5-01-64 6-03-64	97.0 97.0 95.0 97.0 94.0 93.0 90.0 91.0 87.0 91.0 92.0 92.9	154.0 154.0 156.0 154.0 157.0 158.0 161.0 160.0 164.0 160.0 159.0 158.1	6001
21S/25E-08H01 M	285.0	9-30-63 2-07-64	122.5 82.5	162.5 202.5	6001
21S/25E-16A01 M	291.0	7-02-63 8-02-63 9-04-63 9-30-63 11-08-63 12-05-63 1-05-64 2-01-64 3-02-64 4-03-64	38.0 49.0 37.0 23.0* 36.0 41.0 49.0 57.0 50.0 47.0	253.0 242.0 254.0 268.0 255.0 250.0 242.0 234.0 241.0 244.0	6001
LOWER TULE RIVER IRRIGATION DIST 5-22-30					
21S/25E-16A01 M CONT.	291.0	5-01-64 6-03-64	49.0 51.7	242.0 239.3	6001
21S/26E-06G02 M	322.0	7-02-63 8-02-63 9-03-63 9-30-63 11-08-63 12-02-63 1-05-64 2-01-64 3-02-64 4-03-64 5-01-64 6-03-64	116.5 129.5 120.5 102.5 84.5 80.5 78.5 78.5 99.5 102.5 101.5 106.6	205.5 192.5 201.5 219.5 237.5 241.5 243.5 243.5 222.5 219.5 220.5 215.4	6001
21S/26E-10H01 M	359.0	7-02-63 8-01-63 9-03-63 9-28-63 10-21-63 12-02-63 1-05-64 2-01-64 3-02-64 4-03-64 5-01-64 6-03-64	□ □ □ 62.0 87.0 80.0 82.0 78.0 75.0 73.0 75.0	297.0 272.0 279.0 277.0 281.0 284.0 286.0 284.0	6001
22S/24E-09A01 M	244.0	7-02-63 8-02-63 9-04-63 9-28-63 10-27-63 11-08-63 12-05-63 1-02-64 3-02-64 4-03-64 5-01-64 6-03-64	124.0 120.0 120.0 115.0 124.0 119.0 125.0 113.0 113.0 113.0 109.0 122.9	120.0 124.0 129.0 120.0 125.0 119.0 131.0 131.0 135.0 121.1	6001
22S/24E-15A01 M	251.5	9-26-63 2-06-64	155.0 132.0	96.5 119.5	6001
22S/25E-10E01 M	294.0	7-01-63	111.5	182.5	6001

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
LOWER TULE RIVER IRRIGATION DIST					
5-22-30			VANDALIA IRRIGATION DISTRICT		
22S/25E-10E01 M	294.0	8-02-63	119.5	174.5	6001
CONT.					
		9-04-63	114.5	179.5	
		9-28-63	115.5	178.5	
		11-08-63	115.5	178.5	
		12-05-63	116.5	177.5	
		1-02-64	103.5	190.5	
		2-01-64	108.5	185.5	
		3-02-64	112.5	181.5	
		4-03-64	104.5	189.5	
		5-01-64	114.5	179.5	
		6-03-64	111.3	182.7	
22S/25E-15A01 M	300.5	9-26-63	130.5	170.0	6001
		2-06-64	141.5	159.0	
22S/26E-06A01 M	337.0	9-23-63	117.3	219.7	6001
		2-03-64	121.5	215.5	
22S/26E-06F04 M	331.0	7-01-63	105.5	225.5	6001
		8-02-63	132.5	198.5	
		9-04-63	125.5	205.5	
		9-25-63	127.5	203.5	
		10-21-63	□		
		11-08-63	119.5	211.5	
		12-05-63	116.5	214.5	
		1-05-64	115.5	215.5	
		2-04-64	114.5	216.5	
		3-02-64	115.5	215.5	
		4-03-64	117.5	213.5	
		5-01-64	124.5	206.5	
		6-03-64	137.3	193.7	
5-22-31			VANDALIA IRRIGATION DISTRICT		
22S/28E-07O01 M	524.0	7-25-63	131.3	403.7	6001
CONT.					
		8-29-63	140.0	395.0	
		9-23-63	137.4	397.6	
		10-21-63	118.2	416.8	
		12-02-63	108.7	426.3	
		12-24-63	106.4	428.6	
		1-21-64	105.2	429.8	
		2-24-64	102.6	432.4	
		3-25-64	105.0	430.0	
		4-22-64	119.6	415.4	
		5-19-64	119.0	416.0	
		6-22-64	128.2	406.8	
5-22-32			SAUCELITO IRRIGATION DISTRICT		
22S/26E-12R02 M	396.0	8-20-63	135.9	260.1	6001
		9-23-63	118.2	277.8	
		11-22-63	117.4	278.6	
		2-07-64	109.7	286.3	
		3-25-64	116.8	279.2	
		5-26-64	121.2	274.8	
22S/26E-15J01 M	371.0	7-25-63	145.5	225.5	6001
		8-29-63	143.1	227.9	
		9-24-63	138.3	232.7	
		10-21-63	134.5	236.5	
		12-02-63	131.5	239.5	
		12-24-63	129.3	241.7	
		1-21-64	135.7	235.3	
		2-24-64	132.5	238.5	
		3-25-64	□		
		4-22-64	137.0	234.0	
		5-19-64	□		
		6-22-64	□		
22S/26E-32E01 M	339.0	7-25-63	204.3	134.7	6001
		8-29-63	208.6	130.4	
		9-24-63	202.4	136.6	
		10-21-63	207.0	132.0	
		12-03-63	197.5	141.5	
		12-24-63	195.0	144.0	
		1-21-64	197.3	141.7	
		2-24-64	203.3	135.7	
5-22-31			VANDALIA IRRIGATION DISTRICT		
22S/28E-07O01 M	524.0	7-25-63	129.6	394.4	6001
CONT.					
		8-29-63	□		
		9-23-63	131.4	392.6	
		10-21-63	131.6	392.4	
		12-02-63	126.4	397.6	
		12-24-63	125.2	398.8	
		1-21-64	122.5	401.5	
		2-24-64	127.0	397.0	
		3-25-64	128.2	395.8	
		4-22-64	131.7	392.3	
		5-19-64	□		

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
SAUCELITO IRRIGATION DISTRICT					
5-22-32					
22S/26E-32E01 M	339.0	3-25-64	192.5	146.5	6001
CONT.		4-22-64	203.5	135.5	
		5-19-64	204.2	134.8	
		6-22-64	□		
23S/26E-02R01 M	397.0	9-25-63	157.5	239.5	6001
		2-05-64	148.8	248.2	
23S/26E-03R01 M	381.0	7-25-63	186.6	194.4	6001
		8-29-63	187.4	193.6	
		9-19-63	188.7	192.3	
		10-22-63	173.0	208.0	
		12-02-63	167.0	214.0	
		12-24-63	165.5	215.5	
		1-21-64	163.2	217.8	
		2-24-64	177.2	203.8	
		3-25-64	177.5	203.5	
		4-22-64	181.6	199.4	
		5-19-64	178.6	202.4	
		6-22-64	□		
PIXLEY IRRIGATION DISTRICT					
5-22-33					
22S/25E-25N01 M	310.0	7-25-63	207.5	102.5	6001
		8-29-63	209.7	100.3	
		9-24-63	200.3	109.7	
		10-22-63	191.9	118.1	
		12-03-63	184.1	125.9	
		12-23-63	181.4	128.6	
		1-20-64	178.6	131.4	
		2-24-64	182.8	127.2	
		3-25-64	186.4	123.6	
		4-22-64	190.7	119.3	
		5-19-64	197.8	112.2	
		6-22-64	212.5	97.5	
23S/23E-02B01 M	207.0	9-24-63	□		6001
		1-30-64	□		
23S/24E-16R01 M	222.0	7-26-63	127.8	94.2	6001
		8-30-63	130.5	91.5	
		9-23-63	130.7	91.3	
		10-22-63	130.0	92.0	
		12-03-63	125.0	97.0	
		12-23-63	123.7	98.3	
PIXLEY IRRIGATION DISTRICT					
5-22-33					
23S/25E-14C01 M	300.0	9-19-63	83.0	217.0	6001
		1-31-64	75.5	224.5	
23S/25E-15J02 M	291.0	7-25-63	202.0	89.0	6001
		8-29-63	206.1	84.9	
		9-19-63	196.2	94.8	
		10-22-63	194.3	96.7	
		12-03-63	160.0	131.0	
		12-23-63	157.7	133.3	
		1-20-64	151.4	139.6	
		2-24-64	161.8	129.2	
		3-26-64	175.1	115.9	
		4-22-64	□		
		5-19-64	□		
		6-22-64	□		
23S/25E-16N03 M	263.0	7-17-63	196.3	66.7	5000
		8-14-63	201.7	61.3	
		9-12-63	194.4	68.6	
		10-10-63	174.4	88.6	
		11-04-63	156.0	107.0	
		12-04-63	144.6	118.4	
		1-06-64	138.4	124.6	
		2-04-64	134.3	128.7	
		3-03-64	160.2	102.8	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
PIXLEY IRRIGATION DISTRICT					
5-22.33					
23S/25E-16N03 M CONT.	263.0	3-18-64	160.2	102.8	5000
		3-31-64	162.6	100.4	
		5-01-64	181.0	82.0	
		6-26-64	□ *		
23S/25E-16N04 M	263.0	7-17-63	105.3	157.7	5000
		8-14-63	105.5	157.5	
		9-12-63	103.9	159.1	
		10-10-63	101.2	161.8	
		11-04-63	99.2	163.8	
		12-04-63	97.4	165.6	
		1-06-64	96.1	166.9	
		2-04-64	95.2	167.8	
		3-03-64	95.5	167.5	
		3-31-64	95.7	167.3	
		5-01-64	97.0	166.0	
		6-26-64	101.8	161.2	
23S/25E-17003 M	269.0	7-17-63	108.2	160.8	5000
		8-14-63	108.2	160.8	
		9-12-63	107.4	161.6	
		10-10-63	105.4	163.6	
		11-04-63	103.6	165.4	
		12-04-63	101.7	167.3	
		1-05-64	100.4	168.6	
		2-04-64	99.5	169.5	
		3-03-64	99.6	169.4	
		3-31-64	99.9	169.1	
		5-01-64	100.8	168.2	
		6-26-64	105.0	164.0	
23S/26E-08R01 M	345.0	7-25-63	196.2	148.8	6001
		8-29-63	198.8	146.2	
		9-19-63	195.1	149.9	
		10-22-63	188.7	156.3	
		12-03-63	183.5	161.5	
		12-24-63	182.0	163.0	
		1-20-64	178.6	166.4	
		2-24-64	183.7	161.3	
		3-25-64	181.1	163.9	
		4-22-64	179.5	165.5	
		5-19-64	180.3	164.7	
		6-22-64	188.4	156.6	
ALPAUGH-AlLENSWORTH AREA					
5-22.34					
22S/23E-28L01 M	195.0	7-26-63	95.0	100.0	6001
		8-30-63	90.3	104.7	
		9-23-63	83.2	111.8	
		10-22-63	89.7	105.3	
		12-04-63	65.0	130.0	
		12-23-63	64.0	131.0	
		1-20-64	68.2	126.8	
		2-25-64	91.2	103.8	
		3-26-64	95.8	99.2	
		4-23-64	100.3	94.7	
		5-19-64	87.3	107.7	
		6-23-64	124.9	70.1	
23S/23E-33A01 M	210.0	7-26-63	13.8	196.2	6001
		8-30-63	13.7	196.3	
		9-24-63	13.4	196.6	
		10-22-63	13.7	196.3	
		12-04-63	13.7	196.3	
		12-23-63	13.3	196.7	
		1-20-64	13.5	196.5	
		2-24-64	14.1	195.9	
		3-26-64	14.0	196.0	
		4-23-64	13.8	196.2	
		5-19-64	13.8	196.2	
		6-22-64	13.8	196.2	
23S/23E-33A04 M	210.0	7-26-63	73.7	136.3	6001
		8-30-63	75.2	134.8	
		9-24-63	75.5	134.5	
		10-22-63	75.7	134.3	
		12-04-63	75.7	134.3	
		12-23-63	75.3	134.7	
		1-20-64	74.7	135.3	
		2-24-64	72.9	137.1	
		3-26-64	72.2	137.8	
		4-23-64	72.5	137.5	
		5-19-64	72.2	137.8	
		6-22-64	74.0	136.0	
23S/23E-33A05 M	210.0	7-26-63	123.0	87.0	6001
		8-30-63	125.1	84.9	
		9-24-63	127.5	82.5	
		10-22-63	127.0	83.0	
		12-04-63	127.8	82.2	
		12-23-63	126.7	83.3	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
ALPAUGH-ALLENSWORTH AREA					
5-22.34					
23S/23E-33A05 M	210.0	1-20-64	124.9	85.1	6001
CONT.		2-24-64	122.7	87.3	
		3-26-64	121.7	88.3	
		4-23-64	121.2	88.8	
		5-19-64	121.4	88.6	
		6-22-64	122.0	88.0	
24S/23E-21B02 M	204.0	9-16-63	51.6	152.4	6001
		1-30-64	52.3	151.7	
24S/23E-22E01 M	205.0	7-26-63	76.8	128.2	6001
		8-30-63	81.7	123.3	
		9-16-63	87.0	118.0	
		10-22-63	81.2	123.8	
		12-03-63	76.0	129.0	
		12-23-63	73.8	131.2	
		1-20-64	73.4	131.6	
		2-24-64	74.7	130.3	
		3-26-64	80.1	124.9	
		4-22-64	79.4	125.6	
		5-20-64	78.9	126.1	
		6-23-64	80.3	124.7	
24S/23E-34R01 M	206.0	9-16-63	162.4	43.6	6001
		1-30-64	155.4	50.6	
24S/24E-20R01 M	218.0	7-26-63	199.3	18.7	6001
		8-30-63	219.8	1.8	
		9-19-63	210.0	8.0	
		10-22-63			
		12-03-63	166.4	51.6	
		12-23-63	154.5	63.5	
		1-20-64	144.9	73.1	
		2-24-64	148.7	69.3	
		3-26-64			
		4-23-64			
		5-20-64			
		6-23-64	194.6	23.4	
24S/24E-23Q01 M	235.0	9-19-63	46.2	188.8	6001
		1-30-64	47.5	187.5	
24S/24E-25F01 M	249.0	7-26-63			6001
		8-30-63			
		9-19-63			
ALPAUGH-ALLENSWORTH AREA					
5-22.34					
24S/24E-25F01 M	249.0	10-22-63			6001
CONT.		12-03-63	100.5	148.5	
		12-23-63	98.8	150.2	
		1-20-64			
		2-24-64			
		3-26-64			
		4-23-64			
		5-20-64			
		6-23-64			
24S/24E-32K04 M	226.0	7-26-63	133.3	92.7	6001
		8-30-63	143.6	82.4	
		9-19-63	136.4	89.6	
		10-22-63	126.2	99.8	
		12-03-63	113.2	112.8	
		12-23-63	109.1	116.9	
		1-20-64	102.0	124.0	
		1-30-64	108.0	118.0	
		2-25-64	109.6	116.4	
		3-26-64	127.1	98.9	
		4-23-64	116.2	109.8	
		5-20-64	127.5	98.5	
		6-23-64	128.6	97.4	
DELANO-EARLIMART IRRIG DIST					
5-22.35					
23S/25E-27J02 M	296.0	9-23-63	105.0	191.0	6001
		2-04-64	98.0	198.0	
23S/26E-29P01 M	356.5	9-24-63	198.5	158.0	6001
		2-04-64	188.5	168.0	
23S/27E-28J01 M	533.3	9-20-63	419.2	114.1	6001
		2-03-64	348.6	184.7	
24S/25E-02H01 M	320.0	7-25-63	104.8	215.2	6001
		8-29-63	103.2	216.8	
		9-19-63	103.0	217.0	
		10-22-63	102.0	218.0	
		12-03-63	100.5	219.5	
		12-23-63	100.0	220.0	
		1-20-64	101.0	219.0	
		2-24-64	101.6	218.4	
		3-26-64	102.3	217.7	
		4-22-64	102.4	217.6	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
DELANO-EARLMART IRRIG DIST 5-22.35					
24S/25E-02H01 M	320.0	5-20-64	102.5	217.5	6001
CONT.		6-22-64	102.9	217.1	
24S/25E-10A01 M	304.0	9-23-63	140.5	163.5	6001
		2-04-64	120.5	183.5	
24S/25E-33J01 M	291.5	9-19-63	77.0	214.5	6001
		1-30-64	74.0	217.5	
24S/26E-05R01 M	376.0	9-24-63	190.0	186.0	6001
		2-05-64	182.0	194.0	
24S/26E-20H01 M	378.0	9-24-63	184.0	194.0	6001
		2-06-64	156.0	222.0	
24S/26E-29R02 M	400.0	7-18-63	157.7	242.3	5000
		8-16-63	141.6	258.4	
		9-12-63	140.4	259.6	
		9-24-63	150.0	250.0	6001
		10-11-63	139.5	260.5	5000
		11-14-63	135.4	264.6	
		12-10-63	140.0	260.0	
		1-27-64	138.6	261.4	
		2-06-64	142.0	258.0	6001
		2-18-64	142.3	257.7	5000
		3-16-64	146.9	253.1	
		4-20-64	149.6	250.4	
		5-18-64	155.5	244.5	
		6-24-64	158.5	241.5	
24S/26E-32G01 M	396.0	9-26-63	132.5	263.5	6001
		2-06-64	125.5	270.5	
24S/26E-34F01 M	445.0	7-17-63	273.6	171.4	5000
		8-14-63	269.3	175.7	
		9-12-63	266.0	179.0	
		10-10-63	255.7	189.3	
		11-05-63	247.8	197.2	
		12-04-63	243.2	201.8	
		1-05-64	236.1	208.9	
		2-05-64	240.1	204.9	
		3-04-64	247.7	197.3	
		3-31-64	255.3	189.7	
		5-01-64	257.6	187.4	
		6-25-64	283.9	161.1	
DELANO-EARLMART IRRIG DIST 5-22.35					
24S/27E-31P01 M	526.5	9-19-63	396.0	157.5	6001
		1-25-64	377.5	149.0	
25S/26E-01A02 M	505.5	7-17-63	393.5	112.0	5000
		8-14-63	385.5	120.0	
		9-12-63	364.3	141.2	
		10-10-63	342.3	163.2	
		11-05-63	342.7	162.8	
		1-05-64	336.0	169.5	
		2-05-64	331.0	174.5	
		3-04-64	345.9	159.6	
		3-31-64	349.5	156.0	
		5-01-64	403.0	102.5	
		6-25-64	500.6	4.9	
25S/26E-10B03 M	430.0	9-26-63	238.5	191.5	6001
		2-11-64	226.5	203.5	
25S/26E-16P01 M	388.0	7-18-63	118.0	270.0	5000
		8-16-63	117.1	270.9	
		9-12-63	115.5	272.5	
		10-11-63	114.5	273.5	
		11-14-63	113.3	274.7	
		1-27-64	113.0	275.0	
		2-18-64	113.9	274.1	
		3-16-64	115.0	273.0	
		4-20-64	114.6	273.4	
		5-18-64	113.0	275.0	
		6-24-64	109.5	278.5	
25S/27E-22H01 M	750.0	9-19-63	380.2	369.8	6001
		1-30-64	380.2		
SOUTHERN SAN JOAQUIN MUD 5-22.36					
25S/24E-12A02 M	253.0	7-18-63	107.2	145.8	5000
		8-16-63	109.6	143.4	
		9-12-63	110.6	142.4	
		10-11-63	99.5	153.5	
		11-14-63	95.4	157.6	
		12-10-63	87.3	165.7	
		1-27-64	86.4	166.6	
		2-18-64	87.2	165.8	
		3-16-64	96.6	156.4	
		4-20-64	93.7	159.3	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
SOUTHERN SAN JOAQUIN MUD					
	5-22-36				
25S/24E-12A02 M	253.0	5-18-64	96.5	156.5	5000
CONT.		6-24-64	□		
25S/25E-06H01 M	259.0	9-17-63	81.3	177.7	6001
		1-27-64	□		
25S/25E-22D01 M	286.0	7-18-63	178.2	107.8	5000
		8-16-63	195.8	90.2	
		9-12-63	199.6	86.4	
		10-11-63	182.7	103.3	
		11-14-63	159.3	126.7	
		12-10-63	145.0	141.0	
		1-27-64	133.9	152.1	
		2-18-64	136.7	149.3	
		3-16-64	162.1	123.9	
		4-20-64	167.1	118.9	
		5-18-64	174.1	111.9	
		6-24-64	209.5	76.5	
25S/25E-35P01 M	322.0	9-17-63	192.0	130.0	6001
		1-27-64	149.6	172.4	
25S/26E-28E01 M	394.0	7-18-63	176.6	217.4	5000
		8-16-63	175.8	218.2	
		9-12-63	172.6	221.4	
		10-11-63	169.4	224.6	
		11-14-63	170.4	223.6	
		12-10-63	175.7	218.3	
		1-27-64	163.5	230.5	
		2-18-64	162.4	231.6	
		3-16-64	166.1	227.9	
		4-20-64	165.6	228.4	
		5-18-64	164.3	229.7	
		6-24-64	170.2	223.8	
25S/26E-28H02 M	414.0	9-19-63	204.5	209.5	6001
		1-29-64	188.0	226.0	
26S/25E-01C01 M	333.5	7-18-63	125.4	208.1	5000
		8-16-63	126.6	206.9	
		9-12-63	@		
26S/25E-02D01 M	336.0	11-14-63	138.8	197.2	5000
		12-10-63	137.5	198.5	
		1-27-64	136.3	199.7	
NORTH KERN WATER STORAGE DIST					
	5-22-37				
26S/25E-15R01 M	352.3	7-01-63	222.6*	129.7	8700
		7-15-63	267.6*	84.7	
		8-01-63	253.6*	98.7	
		8-19-63	271.6*	80.7	
		9-04-63	273.6*	78.7	
		1-02-64	168.6	183.7	
		1-15-64	168.6*	183.7	
		2-03-64	203.6*	148.7	
		2-17-64	178.6*	173.7	
26S/26E-16P01 M	443.0	9-20-63	307.5	135.5	6001
		1-28-64	288.8	154.2	
26S/26E-29C01 M	411.0	7-18-63	262.9	148.1	5000
		8-16-63	276.9	134.1	
		9-12-63	274.8	136.2	
		10-11-63	268.2	142.8	
		11-14-63	262.5	148.5	
		12-10-63	259.1	151.9	
		1-27-64	257.1	153.9	
		2-18-64	259.8	151.2	
		3-16-64	270.1	140.9	
		4-20-64	271.5	139.5	
		5-19-64	□		

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
NORTH KERN WATER STORAGE DIST					
			5-22-37		
26S/25E-15R01 M	352.3	4-03-64	207.6	144.7	8700
CONT.		6-15-64	279.6*	72.7	
26S/25E-31R01 M	336.6	7-01-63	233.1*	103.5	8700
		7-15-63	263.1*	73.5	
		8-20-63	272.1*	64.5	
		9-04-63	262.1*	74.5	
		9-26-63	248.1*	88.5	
		1-02-64	180.1*	156.5	
		1-15-64	181.1*	155.5	
		2-04-64	185.1*	151.5	
		2-17-64	188.1*	148.5	
		6-15-64	276.1*	60.5	
26S/26E-30P01 M	392.0	7-01-63	257.0*	135.0	8700
		7-15-63	253.0*	139.0	
		8-01-63	259.0*	133.0	
		8-17-63	264.0	128.0	
		9-04-63	266.0	126.0	
		12-00-63	222.0	170.0	
		1-02-64	228.0	164.0	
		1-15-64	231.0	161.0	
		2-03-64	229.0	163.0	
		2-17-64	229.0	163.0	
		3-30-64	294.0	98.0	
		6-15-64	316.0	76.0	
27S/25E-01A01 M	401.0	9-17-63	83.2	317.8	6001
		1-29-64	73.5	327.5	
27S/25E-01N01 M	394.0	7-18-63	129.1	264.9	5000
		8-15-63	129.5	264.5	
		9-12-63	128.9	265.1	
		10-11-63	127.7	266.3	
		11-14-63	121.4	272.6	
		12-10-63	118.9	275.1	
		1-27-64	115.7	278.3	
		2-18-64	115.0	279.0	
		3-16-64	115.5	278.5	
		4-20-64	119.4	274.6	
		5-18-64	120.0	274.0	
		6-24-64	124.7	269.3	
27S/26E-06H02 M	416.0	9-17-63	271.5	144.5	6001
		1-27-64	□		
NORTH KERN WATER STORAGE DIST					
			5-22-37		
27S/26E-20D01 M	446.8	7-18-63	□		5000
		8-15-63	□		
		9-12-63	314.3	132.5	
		10-11-63	302.2	144.6	
		11-14-63	294.4	152.4	
		12-10-63	289.7	157.1	
		1-27-64	286.4	160.4	
		2-18-64	285.7	161.1	
		3-16-64	□		
		4-20-64	□		
		5-18-64	304.3	142.5	
		6-24-64	□		
27S/26E-20E01 M	435.7	7-05-63	335.6*	100.1	8700
		7-18-63	299.6*	136.1	
		8-06-63	305.6*	130.1	
		8-23-63	306.6*	129.1	
		9-09-63	301.6*	134.1	
		9-23-63	318.6*	117.1	
		12-00-63	280.6*	155.1	
		1-06-64	277.6*	158.1	
		1-21-64	277.6*	158.1	
		2-06-64	275.6*	160.1	
		2-24-64	276.6*	159.1	
		5-05-64	290.6*	145.1	
27S/27E-30H02 M	527.0	9-18-63	□		6001
		1-27-64	□		
28S/25E-13L01 M	361.1	7-08-63	212.1*	149.0	8700
		7-16-63	200.1	161.0	
		8-06-63	196.1*	165.0	
		8-26-63	191.1*	170.0	
		9-04-63	190.1*	171.0	
		12-00-63	187.1*	174.0	
		1-02-64	186.1*	175.0	
		1-15-64	186.1*	175.0	
		2-03-64	185.1*	176.0	
		2-16-64	184.1*	177.0	
		6-15-64	209.1*	152.0	
28S/26E-21H01 M	388.0	7-18-63	166.1	221.9	5000
		8-15-63	188.1	219.9	
		9-12-63	168.3	219.7	
		10-11-63	166.5	221.5	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
NORTH KERN WATER STORAGE DIST					
5-22-37					
28S/26E-21H01 M	388.0	11-14-63	163.7	224.3	5000
CONT.		12-10-63	159.9	228.1	
		1-27-64	155.6	232.4	
		2-18-64	155.2	232.8	
		3-17-64	156.6	231.4	
		4-20-64	158.7	229.3	
		5-18-64	160.3	227.7	
		6-24-64	163.6	224.4	
SHAFTER-WASCO IRRIGATION DIST					
5-22-38					
27S/24E-01L02 M	322.0	7-18-63	259.0	63.0	5000
		8-16-63	268.6	53.4	
		9-12-63	256.7	65.3	
		10-11-63	225.7	96.3	
		11-14-63	195.7	126.3	
		12-10-63	188.5	133.5	
		1-27-64	185.6	136.4	
		2-18-64	192.3	129.7	
		3-16-64	229.2	92.8	
		4-20-64	217.8	104.2	
		5-18-64	226.2	95.8	
		6-24-64	268.8	53.2	
KERN RIVER DELTA AREA					
5-22-40					
27S/24E-35C01 M	316.0	7-03-63	242.8*	73.2	8700
		7-17-63	218.8*	97.2	
		8-05-63	225.8*	90.2	
		8-22-63	238.8*	77.2	
		9-06-63	227.8*	88.2	
		9-26-63	215.8*	100.2	
		12-18-63	187.8	128.2	
		1-05-64	185.8*	130.2	
		1-20-64	186.8*	129.2	
		2-05-64	187.8*	128.2	
		2-20-64	188.8*	127.2	
		6-18-64	231.8	84.2	
SHAFTER-WASCO IRRIGATION DIST					
5-22-38					
27S/25E-28A01 M	375.0	7-18-63	258.0	117.0	5000
		8-15-63	258.0	117.0	
		9-12-63	244.1	130.9	
		10-11-63	223.1	151.9	
		11-14-63	215.5	159.5	
SHAFTER-WASCO IRRIGATION DIST					
5-22-38					
27S/25E-28A01 M	375.0	12-10-63	213.5	161.5	5000
CONT.		1-27-64	207.9	167.1	
		2-18-64	253.1	121.9	
		3-16-64	247.2	127.8	
		4-20-64	242.2	132.8	
		5-18-64	268.4	106.6	
		6-24-64	187.3	147.7	
		7-18-63	179.7	155.3	
		8-15-63	189.1	145.9	
		10-11-63	185.0	150.0	
		11-14-63	181.2	153.8	
		12-10-63	178.7	156.3	
		1-27-64	176.5	158.5	
		2-18-64	176.6	158.4	
		3-16-64	184.9	150.1	
		4-20-64	183.8	151.2	
		5-18-64	185.2	149.8	
		6-24-64	192.8	142.2	
KERN RIVER DELTA AREA					
5-22-40					
28S/24E-23D01 M	309.0	7-18-63	186.4	122.6	5000
		8-15-63	191.2	117.8	
		9-12-63	190.3	118.7	
		10-11-63	183.5	125.5	
		11-14-63	181.3	127.7	
		12-10-63	176.1	132.9	
		1-27-64	177.0	132.0	
		2-18-64	176.4	132.6	
		3-17-64	182.1	126.9	
		4-20-64	181.1	127.9	
		5-18-64	183.0	126.0	
		6-24-64	192.9	116.1	
SHAFTER-WASCO IRRIGATION DIST					
5-22-38					
28S/25E-34J01 M	326.0	7-15-63	150.0	176.0	6001
		8-14-63	152.0	174.0	
		9-16-63	158.0	168.0	
		11-14-63	150.0	176.0	
		12-12-63	155.0	171.0	
		2-06-64	149.0	177.0	
SHAFTER-WASCO IRRIGATION DIST					
5-22-38					
28S/26E-29L01 M	349.0	7-08-63	166.1*	182.9	8700
		7-16-63	165.1*	183.9	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
KERN RIVER DELTA AREA					
28S/26E-29L01 M	349.0	8-06-63	168.1*	180.9	8700
CONT.		8-26-63	169.1*	179.9	
		9-04-63	169.1*	179.9	6001
		9-17-63	163.1	185.9	8700
		12-00-63	144.1*	204.9	
		1-02-64	142.1*	206.9	
		1-15-64	142.1*	206.9	
		2-03-64	141.1*	207.9	
		2-16-64	156.1*	192.9	
		4-28-64	159.1*	189.9	
		6-15-64	165.1	183.9	
29S/25E-12M03 M	330.0	7-18-63	149.7	180.3	5000
		8-15-63	152.5	177.5	
		9-12-63	150.9	179.1	
		10-11-63	148.3	181.7	
		11-14-63	144.4	185.6	
		12-10-63	141.5	188.5	
		1-27-64	140.4	189.6	
		2-18-64	140.2	189.8	
		3-17-64	142.6	187.4	
		4-20-64	144.4	185.6	
		5-18-64	146.5	183.5	
		6-24-64	152.8	177.2	
29S/27E-33D01 M	382.0	7-18-63	87.3	294.7	5000
		8-15-63	86.8	295.2	
		9-12-63	78.5	303.5	
		10-11-63	73.4	308.6	
		11-14-63	67.4	314.6	
		12-10-63	66.2	315.8	
		1-27-64	70.9	311.1	
		2-18-64	74.4	307.6	
		3-17-64	76.6	305.4	
		4-20-64	79.7	302.3	
		5-18-64	83.1	298.9	
		6-24-64	93.4	288.6	
29S/27E-34N01 M	385.0	7-18-63	83.1	301.9	5000
KERN RIVER DELTA AREA					
29S/27E-34N01 M	385.0	8-15-63	84.5	300.5	5000
CONT.		9-12-63	83.0	302.0	
		10-11-63	81.6	303.4	
		11-14-63	79.1	305.9	
		12-10-63	77.1	307.9	
		1-27-64	74.8	310.2	
		2-18-64	74.1	310.9	
		3-17-64	74.2	310.8	
		4-20-64	74.6	310.4	
		5-18-64	75.8	309.2	
		6-24-64	78.0	307.0	
30S/25E-03H01 M	319.3	7-12-63	133.7*	185.6	8700
		7-23-63	109.7*	209.6	
		8-13-63	133.7*	185.6	
		8-30-63	102.7*	216.6	
		9-11-63	121.7*	197.6	
		12-00-63	85.7*	233.6	
		1-08-64	88.7*	230.6	
		1-22-64	88.7*	230.6	
		2-11-64	112.7*	206.6	
		2-28-64	98.7*	220.6	
		4-23-64	116.7*	202.6	
		6-22-64	125.7*	193.6	
30S/25E-22D01 M	308.5	7-04-63	62.3	246.2	4640
		8-02-63	60.8	247.7	
		9-07-63	59.0	249.5	
		10-02-63	59.1	249.4	
		11-02-63	58.8	249.7	
		12-02-63	58.4	250.1	
		1-03-64	58.9	249.6	
		2-03-64	53.4	255.1	
		3-02-64	60.5	248.0	
		4-01-64	60.7	247.8	
		5-04-64	62.9	245.6	
		5-28-64	63.5	245.0	
		6-30-64	□		
30S/26E-16J01 M	339.1	9-19-63	64.0	275.1	5120
		1-23-64	63.0	276.1	
30S/26E-22P02 M	338.0	7-17-63	79.8	258.2	5000
		8-15-63	80.9	257.1	
		9-12-63	78.0	260.0	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
KERN RIVER DELTA AREA					
30S/26E-22P02 M	338.0	10-11-63	70.7	267.3	5000
CONT.		11-14-63	68.5	269.5	8700
		12-10-63	67.7	270.3	
		1-27-64	68.1	265.9	
		2-18-64	72.8	265.2	
		3-17-64	76.4	261.6	
		4-20-64	72.5	265.5	
		5-18-64	72.9	265.1	
		6-24-64	79.1	258.9	
		7-11-63	88.7*	250.0	
		7-22-63	86.7*	252.0	
30S/26E-27A01 M	338.7	8-12-63	96.7*	242.0	8700
		8-29-63	84.7*	254.0	
		9-10-63	86.7*	252.0	
		10-01-63	83.7*	255.0	
		12-19-63	66.7*	272.0	
		1-08-64	83.7*	255.0	
		1-21-64	68.7*	270.0	
		2-10-64	71.7*	267.0	
		2-27-64	74.7*	264.0	
		4-30-64	89.7*	249.0	
30S/27E-28A02 M	359.0	9-19-63	104.0	255.0	5120
		1-23-64	101.0	258.0	6001
		9-16-63	116.8	237.6	
		1-27-64	99.4	255.0	
		7-17-63	104.4	254.6	
		8-15-63	105.4	253.6	
		9-11-63	102.4	256.6	
		10-10-63	98.6	260.4	
		11-13-63	93.2	265.8	
		12-11-63	89.7	269.3	
30S/28E-34R02 M	359.0	1-28-64	90.1	268.9	5000
		2-19-64	93.1	265.9	
		3-17-64	97.6	261.4	
		4-21-64	96.6	262.4	
		5-19-64	95.6	263.4	
		6-25-64	100.6	258.4	
		9-18-63	85.9	247.1	
		1-22-64	81.4	251.6	
31S/26E-01A01 M	333.0				5120
KERN RIVER DELTA AREA					
31S/26E-35D01 M	294.5	9-18-63	61.2	233.3	5120
		1-22-64	51.2	243.3	8700
		7-08-63	144.6*	196.5	
		7-19-63	146.6*	194.5	
		8-13-63	146.6*	194.5	
		8-26-63	147.6*	193.5	
		9-10-63	139.6*	201.5	
		12-00-63	114.6	226.5	
		1-08-64	100.6	240.5	
		1-22-64	121.6*	219.5	
		2-10-64	101.6	239.5	
31S/27E-04L01 M	341.1	2-26-64	105.6	235.5	5000
		5-26-64	122.6*	218.5	
		6-22-64	120.6	220.5	
		7-17-63	108.4	201.6	
		8-14-63	93.9	216.1	
		9-11-63	□		
		10-10-63	□		
		11-13-63	81.9	228.1	
		12-11-63	68.4	241.6	
		1-28-64	□		
		2-19-64	□		
31S/27E-28H01 M	310.0	3-17-64	86.1	223.9	5120
		4-21-64	□		
		5-19-64	82.8	227.2	
		6-25-64	□		
		9-18-63	71.0	241.1	
		1-22-64	64.5	247.6	
31S/28E-17P02 M	321.1	9-16-63	#		6001
31S/28E-30M01 M	314.7	7-08-63	79.0*	235.7	8700
		7-19-63	75.0*	239.7	
		8-14-63	76.0*	238.7	
		8-27-63	79.0*	235.7	
		9-11-63	78.0*	236.7	
		10-03-63	67.0*	247.7	
		10-03-63	110.0*	204.7	
		12-20-63	64.0	250.7	
		1-08-64	60.0*	254.7	
		1-22-64	67.0*	247.7	
		2-10-64	70.0*	244.7	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA	STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
KERN RIVER DELTA AREA						EDISON-MARICOPA AREA					
5-22.40						5-22.41					
31S/28E-30M01 M CONT.	314.7	2-26-64	152.0*	162.7	8700	30S/28E-10N04 M CONT.	372.0	11-13-63	151.4	220.6	5000
		6-04-64	148.0*	166.7				12-11-63	148.7	223.3	
		6-23-64	152.0*	162.7				1-28-64	146.3	225.7	
32S/26E-36G01 M	378.0	9-16-63	176.2	201.8	5120			2-19-64	147.8	228.2	
		1-20-64	181.2	196.8				3-17-64	150.4	221.6	
32S/27E-18E01 M	292.6	7-09-63	□		8700			4-21-64	152.0	220.0	
		7-22-63	□					5-19-64	154.7	217.3	
		8-14-63	□					6-25-64	162.7	209.3	
		8-27-63	□					9-17-63	340.5	174.5	5050
		1-09-64	173.3*	119.3				1-28-64	331.0	184.0	
		1-22-64	177.3*	115.3				9-16-63	455.3	172.7	6001
		2-10-64	109.3	183.3				1-28-64	□		
		2-26-64	130.3	162.3							
		6-24-64	139.3*	153.3				7-17-63	128.8	292.2	5000
32S/28E-04A01 M	303.0	9-18-63	□	251.1	6001			8-15-63	129.9	291.1	
		1-27-64	51.9					9-11-63	129.6	291.4	
5-22.41								10-10-63	130.2	290.8	
EDISON-MARICOPA AREA								11-13-63	130.9	290.1	
29S/29E-33N01 M	578.0	9-18-63	452.5	125.5	6001			12-11-63	□		
		1-28-64	430.3	147.7				1-28-64	□		
30S/28E-02R01 M	410.0	9-18-63	□		6001			2-19-64	□		
		1-29-64	□					3-17-64	□		
30S/28E-10N01 M	372.0	7-17-63	39.3	332.7	5000						
		8-15-63	30.5	341.5				9-18-63	196.5	595.0	6001
		9-10-63	30.1	341.9				1-28-64	193.0	598.5	5050
		10-10-63	36.6	335.4				9-18-63	289.4	183.1	6001
		11-13-63	35.2	336.8				1-30-64	305.4	167.1	
		12-11-63	34.3	337.7				9-17-63	145.2	254.8	6001
		1-28-64	36.0	336.0				1-28-64	□		
		2-19-64	37.0	335.0				9-19-63	397.0	139.0	6001
		3-17-64	38.4	333.6				1-29-64	360.5	175.5	
		4-21-64	39.2	332.8				9-17-63	231.0	211.5	5120
		5-19-64	38.8	333.2				1-21-64	181.0	261.5	
		6-25-64	38.4	333.6							
30S/28E-10N04 M	372.0	7-17-63	159.9	212.1	5000			9-18-63	□		6001
		8-15-63	152.7	219.3				1-29-64	267.0	119.7	
		9-11-63	159.8	212.2				7-17-63	318.3*	151.7	5000
		10-10-63	158.0	214.0				8-15-63	309.9*	160.1	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
EDISON-MARICOPA AREA					
5-22-41					
32S/29E-16R02 M CONT.	470.0	9-11-63	320.7	149.3	5000
		10-10-63	321.5	148.5	
		11-13-63	319.3	150.7	
		12-11-63	318.9	151.1	
		1-28-64	317.8	152.2	
		2-19-64	318.3	151.7	
		3-17-64	319.1	150.9	
		4-21-64	319.9	150.1	
		5-19-64	320.1	149.9	
		6-25-64	321.9	148.1	
32S/29E-19H02 M	416.0	7-17-63	198.9	217.1	5000
		8-15-63	189.7	226.3	
		9-11-63	198.0	218.0	
		10-10-63	199.9	216.1	
		11-13-63	199.8	216.2	
		12-11-63	199.8	216.4	
		1-28-64	199.6	215.8	
		2-19-64	200.2	216.0	
		3-17-64	200.0	216.7	
		4-21-64	199.3	216.5	
		5-19-64	199.5	216.3	
		6-25-64	199.7		
32S/29E-19H03 M	416.0	7-17-63	363.8	52.2	5000
		8-15-63	369.4	46.6	
		9-11-63	346.6	69.4	
		10-10-63	325.9	90.1	
		11-13-63	299.4	116.6	
		12-11-63	293.6	122.4	
		1-28-64	294.6	121.4	
		2-19-64	313.9	102.1	
		3-17-64	325.9	90.1	
		4-21-64	333.1	82.9	
		5-19-64	339.2	76.8	
		6-25-64	369.7	46.3	
32S/29E-21P01 M	473.0	7-17-63	213.7	259.3	5000
		8-15-63	203.3	269.7	
		9-11-63	211.7	261.3	
		10-10-63	212.4	260.6	
		11-13-63	210.4	262.6	
		12-11-63	210.6	262.4	
		1-28-64	210.6	262.4	
		2-19-64	210.6	262.4	
EDISON-MARICOPA AREA					
5-22-41					
32S/29E-21P01 M CONT.	473.0	3-17-64	210.1	262.9	5000
		4-21-64	211.9	261.1	
		5-19-64	211.5	261.5	
		6-25-64	210.9	262.1	
11N/18W-06P01 S	657.0	9-17-63	□		6001
		1-28-64	□		
11N/18W-28D01 S	850.0	9-17-63	114.7	735.3	6001
		1-29-64	102.5	747.5	
11N/19W-04H01 S	575.9	9-18-63	□		6001
		1-28-64	410.8	165.1	
11N/19W-07R03 S	675.0	7-17-63	506.3	168.7	5000
		8-15-63	466.0	209.0	
		9-11-63	459.8	215.2	
		10-10-63	458.8	216.2	
		11-13-63	456.6	218.4	
		12-11-63	455.9	219.1	
		1-28-64	455.8	219.2	
		2-19-64	461.9	213.1	
		3-17-64	□		
		4-21-64	466.2	208.8	
		5-19-64	462.4	212.6	
		6-25-64	428.8	246.2	
11N/20W-07D01 S	452.3	7-24-63	562.9*	- 110.6	8700
		8-15-63	567.9*	- 115.6	
		9-13-63	567.9*	- 115.6	
		1-10-64	385.9*	66.4	
		2-12-64	□		
		2-27-64	□		
		3-02-64	□		
		6-03-64	□		
		6-10-64	□		
		6-24-64	□		
11N/20W-18F01 S	484.7	9-16-63	□		6001
		1-27-64	349.5	135.2	
11N/20W-24A01 S	730.2	7-10-63	□		8700
		7-24-63	□		
		8-15-63	□		

GROUND WATER LEVELS AT WELLS

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TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
BUENA VISTA WATER STORAGE DIST					
5-22-42			5-22-42		
28S/22E-10D02 M	245.0	1-27-64	26.8	218.2	5120
CONT.					
28S/22E-36P01 M	253.2	7-03-63	45.4	207.8	4640
		8-01-63	45.3	207.9	
		9-06-63	46.8	206.4	
		10-03-63	38.7	214.5	
		11-01-63	32.0	221.2	
		12-02-63	34.2	219.0	
		1-03-64	32.5	220.7	
		2-01-64	□		
		3-02-64	63.4*	189.8	
		4-01-64	46.3	206.9	
		5-04-64	46.5	206.7	
		5-28-64	□		
28S/23E-31R01 M	257.8	7-03-63	72.9	184.9	4640
		8-02-63	49.2	208.6	
		9-06-63	52.4	205.4	
		10-02-63	37.2	220.6	
		11-01-63	43.1	214.7	
		12-02-63	29.3	228.5	
		1-02-64	28.5	229.3	
		2-01-64	50.1	207.7	
		3-02-64	□		
		4-02-64	41.9	215.9	
		5-05-64	42.2	215.6	
		5-28-64	50.1	207.7	
29S/23E-08A01 M	260.3	7-04-63	□		4640
		8-06-63	□		
		9-06-63	62.0	198.3	
		10-03-63	52.3	208.0	
		11-02-63	35.1	225.2	
		12-03-63	34.5	225.8	
		1-01-64	38.1	222.2	
		2-01-64	49.0	211.3	
		3-03-64	□		
		4-02-64	48.0	212.3	
		5-05-64	43.4	216.9	
		5-28-64	47.3	213.0	
		6-28-64	□		
29S/23E-10P01 M	263.5	7-04-63	64.0	199.5	4640
		8-01-63	□		
		9-06-63	44.2	219.3	
BUENA VISTA WATER STORAGE DIST					
5-22-42			5-22-42		
29S/23E-10P01 M	263.5	10-03-63	42.5	221.0	4640
CONT.					
		11-01-63	46.9	216.6	
		12-02-63	41.8	221.7	
		1-02-64	31.7	231.8	
		2-03-64	42.6	220.9	
		3-02-64	77.4	186.1	
		4-01-64	61.5	202.0	
		5-04-64	43.7	219.8	
		5-28-64	45.3	218.2	
		6-28-64	□		
29S/23E-27M01 M	270.0	7-17-63	46.9	223.1	5000
		8-14-63	46.6	223.4	
		9-11-63	44.0	226.0	
		10-10-63	44.6	225.4	
		11-13-63	42.8	227.2	
		12-11-63	42.5	227.5	
		1-28-64	44.2	225.8	
		2-19-64	□ *		
		3-17-64	46.9	223.1	
		4-21-64	46.6	223.4	
		5-19-64	45.9	224.1	
		6-25-64	54.3	215.7	
29S/24E-32Q01 M	280.7	7-03-63	80.9	199.8	4640
		8-01-63	□		
		9-06-63	62.7	218.0	
		10-02-63	57.1	223.6	
		11-01-63	56.2	224.5	
		12-02-63	66.4	214.3	
		1-02-64	57.6	223.1	
		2-01-64	76.6	204.1	
		3-03-64	79.9	200.8	
		4-01-64	62.4	218.3	
		5-04-64	62.3	218.4	
		5-28-64	□		
		6-28-64	□		
30S/23E-01C01 M	276.8	7-03-63	69.6	207.2	4640
		8-02-63	60.8	216.0	
		9-06-63	66.1	210.7	
		10-02-63	50.2	226.6	
		11-01-63	49.8	227.0	
		12-02-63	55.9	220.9	
		1-02-64	57.9	218.9	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA			
BUENA VISTA WATER STORAGE DIST 5-22-42								
30S/23E-01C01 M CONT.	276.8	2-01-64	63.1	213.7	4640			
		3-03-64	72.8	204.0				
		4-02-64	56.5	220.3				
		5-05-64	56.9	219.9				
		5-28-64	64.1	212.7				
		6-30-64	□					
		7-04-63	□					
30S/24E-02C01 M	287.0	8-02-63	□		4640			
		9-07-63	74.7	212.3				
		10-03-63	70.8	216.2				
		11-02-63	68.3	218.7				
		12-03-63	68.1	218.9				
		1-03-64	68.0	219.0				
		2-03-64	78.5	208.5				
		3-03-64	77.3	209.7				
		4-02-64	71.0	216.0				
		5-05-64	□					
		5-28-64	78.8	208.2				
		30S/24E-04C01 M	282.0	7-17-63		67.8	214.2	5000
				8-14-63		69.2	212.8	
9-11-63	62.3			219.7				
10-10-63	59.2			222.8				
11-13-63	59.1			222.9				
12-11-63	57.5			224.5				
1-28-64	76.3			205.7				
2-19-64	84.8			197.2				
3-17-64	73.7			208.3				
4-21-64	71.1			210.9				
5-19-64	71.8			210.2				
6-25-64	80.9			201.1				
31S/25E-27F01 M	283.0			7-17-63	25.4	257.6	5000	
		8-14-63	26.9	256.1				
		9-11-63	26.0	257.0				
		10-10-63	35.0	248.0				
		11-13-63	28.3	254.7				
		12-11-63	25.5	257.5				
		1-28-64	23.4	259.6				
		2-19-64	24.4	258.6				
		3-17-64	34.9	248.1				
		4-21-64	32.3	250.7				
		5-19-64	27.2	255.8				
		6-25-64	29.2	253.8				

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
SEMITROPIC WATER STORAGE DIST 5-22-43					
25S/22E-02N02 M	212.0	7-18-63	61.1	150.9	5000
		8-16-63	65.1	146.9	
		9-12-63	62.6	149.4	
		10-10-63	70.2	141.8	
		11-13-63	69.0*	143.0	
		12-11-63	69.0	143.0	
		1-28-64	70.5	141.5	
		2-19-64	69.6	142.4	
		3-18-64	69.7	142.3	
		4-21-64	69.3	142.7	
		5-19-64	69.8	142.2	
		6-25-64	72.1	139.9	
	25S/22E-14G01 M	215.0	9-30-63	186.5	28.5
		1-31-64	133.5	81.5	
25S/23E-03R01 M	209.0	10-01-63	#		5120
25S/23E-28D01 M	217.0	7-18-63	85.3	131.7	5000
		8-16-63	89.6	127.4	
		9-12-63	92.6	124.4	
		10-10-63	93.4	123.6	
		11-13-63	89.4	127.6	
		12-11-63	85.7	131.3	
		1-28-64	80.4	136.6	
		2-19-64	82.0	135.0	
		3-18-64	84.0	133.0	
		4-21-64	84.5	132.5	
		5-19-64	85.4	131.6	
		6-25-64	89.6	127.4	
25S/23E-28D03 M	217.0	7-18-63	168.3	48.7	5000
		8-16-63	213.7	3.3	
		9-12-63	219.5	2.5	
		10-10-63	215.3	1.7	
		11-13-63	180.0	37.0	
		12-11-63	159.9	57.1	
		1-28-64	148.7	68.3	
		2-19-64	153.0	64.0	
		3-18-64	175.9	41.1	
		4-21-64	168.3	48.7	
		5-19-64	172.2	44.8	
		6-25-64	201.4	15.6	
	25S/24E-07R01 M	228.0	9-20-63	102.2	125.8

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
SEMITROPIC WATER STORAGE DIST 5-22-43					
255/24E-07R01 M	228.0	1-30-64	88.1	139.9	6001
CONT.					
255/24E-15H01 M	248.0	7-18-63	89.5	158.5	5000
		8-16-63	90.1	157.9	
		9-12-63	90.6	157.4	
		10-11-63	89.0	159.0	
		11-14-63	89.0	159.0	
		12-10-63	87.0	161.0	
		1-27-64	87.1	160.9	
		2-18-64	87.1	160.9	
		3-16-64	87.1	160.9	
		4-20-64	87.5	160.5	
		5-18-64	87.6	160.4	
		6-24-64	88.2	159.8	
255/24E-30H01 M	237.4	9-19-63	200.0	37.4	6001
		1-30-64	174.6	62.8	
265/21E-14E01 M	244.0	7-17-63	39.1	204.9	5000
		8-14-63	41.1	202.9	
		9-11-63	38.9	205.1	
		10-10-63	38.3	205.7	
		11-13-63	38.0	206.0	
		12-11-63	37.8	206.2	
		1-28-64	41.3	202.7	
		2-19-64	38.8	205.2	
		3-18-64	39.0	205.0	
		4-21-64	40.9	203.1	
		5-19-64	38.6	205.4	
		6-25-64	38.5	205.5	
265/21E-14J01 M	237.0	9-27-63	20.5	216.5	5120
		1-30-64	12.0	225.0	
265/22E-10G02 M	225.0	7-18-63	□		5000
		8-16-63	□		
		9-12-63	□		
		10-10-63	□		
		11-13-63	□		
		12-11-63	□		
		1-28-64	71.8	153.2	
		2-19-64	73.0	152.0	
		3-18-64	73.3	151.7	
		4-21-64	72.4	152.6	
		5-19-64	72.5	152.5	
SEMITROPIC WATER STORAGE DIST 5-22-43					
265/22E-10G02 M	225.0	6-25-64	77.6	147.4	5000
CONT.					
265/22E-35E01 M	253.0	9-30-63	□		5120
		1-30-64	□		
265/23E-02R01 M	234.9	10-01-63	104.0	130.9	5120
		1-31-64	130.0	104.9	
265/23E-36F01 M	258.0	10-01-63	□		5120
		1-31-64	□		
265/24E-23H01 M	295.5	7-02-63	259.8*	35.7	8700
		7-16-63	273.8*	21.7	
		8-02-63	293.8*	1.7	
		8-20-63	304.8*	9.3	
		9-05-63	301.8*	6.3	
		1-03-64	181.8*	113.7	
		1-17-64	165.8*	129.7	
		2-01-64	218.8*	76.7	
		2-04-64	171.8*	123.7	
		4-22-64	233.8*	61.7	
		6-16-64	290.8*	4.7	
275/22E-02Q01 M	265.0	9-25-63	56.5	208.5	5120
		1-27-64	52.5	212.5	
275/23E-01R01 M	267.0	7-18-63	112.7	154.3	5000
		8-16-63	113.0	154.0	
		9-12-63	113.3	153.7	
		10-11-63	114.0	153.0	
		11-14-63	111.8	155.2	
		12-10-63	111.0	156.0	
		1-27-64	111.4	155.6	
		2-18-64	111.9	155.1	
		3-16-64	113.2	153.8	
		4-20-64	112.8	154.2	
		5-18-64	113.3	153.7	
		6-24-64	114.9	152.1	
275/23E-01R04 M	267.0	7-18-63	243.1*	23.9	5000
		8-16-63	256.5*	10.5	
		9-12-63	250.4	16.6	
		10-11-63	219.3	47.7	
		11-14-63	183.7	83.3	
		12-10-63	170.5	96.5	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
SEMITROPIC WATER STORAGE DIST					
			5-22.43		
27S/23E-01R04 M	267.0	1-27-64	171.3	95.7	5000
CONT.		2-18-64	181.2	85.8	
		3-16-64	215.2*	51.8	
		4-20-64	198.9	68.1	
		5-18-64	209.1	57.9	
		6-24-64	249.1	17.9	
27S/23E-06L01 M	258.0	9-25-63	50.0	208.0	5120
		1-28-64	45.0	213.0	
28S/23E-11E01 M	255.0	7-03-63	30.5	224.5	4640
		8-01-63	33.4	221.6	
		9-06-63	30.4	224.6	
		10-02-63	32.4	222.6	
		11-01-63	30.6	224.4	
		12-02-63	31.0	224.0	
		1-02-64	28.3	226.7	
		2-01-64	30.6	224.4	
		3-02-64	30.1	224.9	
		4-01-64	25.8	229.2	
		5-04-64	25.0	230.0	
		5-28-64	31.0	224.0	
28S/24E-28A01 M	301.1	7-04-63	□		4640
		8-02-63	□		
		9-07-63	177.0	124.1	
		10-03-63	□		
		11-01-63	169.0	132.1	
		12-03-63	165.8	135.3	
		1-03-64	162.9	138.2	
		2-03-64	166.7	134.4	
		3-02-64	169.9	131.2	
		4-01-64	168.5	132.6	
		5-04-64	□		
		5-28-64	□		
29S/24E-14R01 M	290.0	9-20-63	96.5	193.5	5120
		1-24-64	99.0	191.0	
AVENAL-MCKITTRICK AREA					
			5-22.44		
22S/19E-18P02 M	255.0	1-21-64	159.0	96.0	5050
23S/18E-29E02 M	560.0	7-16-63			5000
		8-14-63			
		9-11-63			
		10-10-63			
		11-13-63			
		12-11-63			
		1-28-64			
		2-19-64			
		3-18-64			
		4-21-64			
		5-19-64			
		6-25-64			
25S/20E-04C01 M	268.0	1-30-64	63.0	205.0	5120
26S/17E-13L02 M	910.0	9-26-63	162.5	747.5	5120
		1-29-64	172.5	737.5	
26S/18E-16H01 M	685.0	9-27-63	165.0	520.0	5120
		1-29-64	166.0	519.0	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
AVENAL-MCKITTICK AREA					
	5-22-44				
26S/18E-19802 M	875.0	9-26-63	160.0	715.0	5120
		1-29-64	153.0	722.0	
26S/18E-27F01 M	730.0	9-26-63	205.5	524.5	5120
		1-29-64	206.0	524.0	
26S/19E-12L01 M	530.0	9-27-63	□		5120
		1-30-64	□		
27S/18E-15R01 M	1220.0	9-26-63	38.0*	1182.0	5120
		1-24-64	38.0*	1182.0	
28S/21E-13E01 M	370.0	7-01-63	#		5050
TULARE LAKE-LOST HILLS AREA					
	5-22-45				
21S/20E-12M01 M	181.0	7-16-63	179.8	1.2	5000
		8-13-63	176.4	4.6	
		9-10-63	171.9	9.1	
		10-09-63	167.7	13.3	
		11-12-63	159.8	21.2	
		12-12-63	156.9	24.1	
		1-29-64	153.9	27.1	
		2-06-64	160.3	20.7	5050
		2-19-64	157.0	24.0	5000
		3-18-64	163.8	17.2	
		4-22-64	175.0	6.0	
		5-20-64	175.5	5.5	
		6-26-64	182.5	- 1.5	
21S/20E-27A01 M	178.0	7-16-63	187.7	- 9.7	5000
		8-13-63	192.5*	- 14.5	
		9-10-63	181.3	- 3.3	
		10-09-63	173.9	4.1	
		11-12-63	167.3	10.7	
		12-12-63	162.2	15.8	
		1-29-64	164.2	13.8	
		2-06-64	176.5	1.5	5050
		2-19-64	166.2	11.8	5000
		3-18-64	189.0	- 11.0	
		4-22-64	197.5	- 19.5	
		5-20-64	183.6	- 5.6	
		6-26-64	199.9	- 21.9	
25S/21E-22H01 M	217.0	7-17-63	104.1	112.9	5000
TULARE LAKE-LOST HILLS AREA					
	5-22-45				
25S/21E-22H01 M	217.0	8-14-63	104.3	112.7	5000
		9-11-63	108.3	108.7	
		10-10-63	111.8	105.2	
		11-13-63	111.9	105.1	
		12-11-63	111.8	105.2	
		1-28-64	105.3	111.7	
		2-19-64	105.5	111.5	
		3-18-64	106.9	110.1	
		4-21-64	109.1	107.9	
		5-19-64	107.2	109.8	
		6-25-64	108.7	108.3	
CORCORAN IRRIGATION DISTRICT					
	5-22-46				
21S/22E-10J03 M	204.0	7-29-63	□		5050
		8-29-63	#		
21S/22E-16L02 M	196.5	11-27-63	44.7	151.8	5050
		12-30-63	43.3	153.2	
		2-03-64	43.1	153.4	
		2-24-64	44.2	152.3	
		3-31-64	45.2	151.3	
		4-27-64	45.6	150.9	
		5-25-64	46.3	150.2	
		6-24-64	47.7	148.8	
21S/22E-16M01 M	196.5	7-29-63	16.7	179.8	5050
		8-29-63	17.0	179.5	
		9-27-63	16.7	179.8	
		10-28-63	16.4	180.1	
		11-12-63	#		
21S/22E-24K01 M	209.0	2-05-64	□		5050
21S/22E-27A01 M	196.0	7-29-63	45.3	150.7	5050
		8-29-63	43.2	152.8	
		9-27-63	48.0	148.0	
		10-28-63	44.5	151.5	
		11-27-63	38.2	157.8	
		12-30-63	38.1	157.9	
		2-03-64	40.0	156.0	
		2-24-64	□		
		3-31-64	38.5	157.5	
		4-27-64	38.5	157.5	
		5-25-64	39.6	156.4	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
CORCORAN IRRIGATION DISTRICT					
5-22-46					
21S/22E-27A01 M	196.0	6-24-64	41.0	155.0	5050
CONT.					
22S/22E-01B02 M	201.0	7-29-63	25.8	175.2	5050
		8-29-63	25.3	175.7	
		9-27-63	27.2	173.8	
		10-28-63	23.7	177.3	
		11-27-63	23.1	177.9	
		12-30-63	23.0	178.0	
		2-03-64	22.9	178.1	
		2-24-64	23.0	178.0	
		3-31-64	22.2	178.8	
		4-27-64	23.5	177.5	
		5-25-64	23.6	177.4	
		6-24-64	24.0	177.0	
22S/22E-05L01 M	188.0	7-29-63	#		5050
22S/22E-08L01 M	188.0	7-29-63	149.5	38.5	5050
		8-29-63	150.1	37.9	
		9-27-63	164.9	23.1	
		10-28-63	166.6	21.4	
		11-27-63	170.3	17.7	
		12-30-63	162.9	25.1	
		2-03-64	133.6	54.4	
		2-24-64	128.9	59.1	
		3-31-64	#		
		4-27-64	150.5	37.5	
		5-25-64	142.0	46.0	
		6-24-64	#		
22S/22E-15C01 M	191.0	7-29-63	135.5	55.5	5050
		8-29-63	135.9	55.1	
		9-27-63	137.3	53.7	
		10-28-63	135.4	55.6	
		11-27-63	129.7	61.3	
		12-30-63	124.5	66.5	
		2-03-64	119.7	71.3	
		2-24-64	120.1	70.9	
		3-31-64	124.5	66.5	
		4-27-64	128.9	62.1	
		5-25-64	131.5	59.5	
		6-24-64	142.2	48.8	
MENDOTA-HURON AREA					
5-22-47					
13S/12E-05Q01 M	247.0	9-03-63	302.0	-	6001
		12-24-63	236.0	11.0	5050
		3-20-64	#		6001
13S/12E-22N01 M	280.0	9-13-63	189.0	91.0	6001
		12-23-63	169.7	110.3	5050
		3-17-64	#		6001
13S/13E-10R01 M	211.0	10-01-63	#		6001
		12-20-63	212.9	1.9	5050
		3-18-64	210.6	0.4	6001
13S/13E-12A01 M	183.0	10-01-63	3.6	179.4	6001
		12-20-63	5.4	177.6	5050
		3-18-64	5.3	177.7	6001
13S/13E-15R01 M	222.0	10-01-63	242.5	-	6001
		12-20-63	227.0	5.0	5050
		3-18-64	248.4	26.4	6001
13S/14E-09J01 M	164.0	10-02-63	DRY		6001
		12-20-63	DRY		5050
13S/14E-32Q1 M	225.0	10-03-63	#		6001
		12-19-63	#		5050
14S/13E-15M01 M	321.0	12-27-63	#		5050
14S/14E-05H01 M	221.0	7-16-63	87.8	133.2	5000
		8-13-63	93.0	128.0	
		9-11-63	93.9	127.1	
		10-09-63	91.7	129.3	
		11-04-63	89.7	131.3	
		12-05-63	86.7	134.3	
		12-19-63	85.8	135.2	
		1-07-64	84.1	136.9	
		2-07-64	84.4	136.6	
		3-05-64	88.5	132.5	
		3-30-64	87.8	133.2	
		4-30-64	87.0	134.0	
		6-23-64	87.4	133.6	
14S/14E-28E02 M	248.0	7-16-63	62.0	186.0	5000
		8-13-63	63.0	185.0	
		9-10-63	63.1	184.9	
		10-09-63	62.9	185.1	
		11-12-63	61.4	186.6	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
MENDOTA-HURON AREA					
5-22-47					
14S/14E-28E02 M	248.0	1-29-64	56.2	191.8	5000
CONT.		2-20-64	56.9	191.1	
		3-19-64	57.9	190.1	
		4-22-64	59.5	188.5	
		5-20-64	60.3	187.7	
		6-25-64	60.0	188.0	
14S/15E-18E02 M	186.0	12-19-63	207.0	-	5050
14S/15E-35N01 M	161.0	12-17-63	52.2	108.8	5050
		2-13-64	55.2	105.8	6001
15S/13E-26N01 M	473.0	12-20-63	□		5050
15S/14E-07B02 M	282.0	7-16-63	②		5000
15S/14E-15E01 M	236.0	7-16-63	60.0	176.0	5000
		8-13-63	61.8	174.2	
		9-10-63	61.9	174.1	
		10-09-63	62.0	174.0	
		11-12-63	61.8	174.2	
		12-12-63	61.6	174.4	
		1-29-64	60.6	175.4	
		2-20-64	60.2	175.8	
		3-19-64	59.8	176.2	
		4-22-64	59.2	176.8	
		5-20-64	59.1	176.9	
		6-26-64	58.9	177.1	
15S/14E-15E04 M	236.0	7-16-63	412.7	-	5000
		8-13-63	416.2	-	
		9-10-63	422.5	-	
		10-09-63	424.7	-	
		11-12-63	409.6	-	
		12-12-63	390.8	-	
		1-29-64	386.4	-	
		2-20-64	402.2	-	
		3-19-64	422.6	-	
		4-22-64	425.9	-	
		5-20-64	427.0	-	
		6-26-64	428.3	-	
15S/15E-22N01 M	175.0	12-17-63	94.3	80.7	5050
		2-13-64	139.5*	35.5	6001
15S/16E-17L01 M	165.0	7-16-63	□		5000
MENDOTA-HURON AREA					
5-22-47					
15S/16E-17L01 M	165.0	8-13-63	□		5000
CONT.		9-10-63	□		
		10-09-63	32.0	133.0	
		11-12-63	31.9	133.1	
		12-12-63	32.7	132.3	
		1-29-64	34.8	130.2	
		2-20-64	34.2	130.8	
		3-19-64	34.1	130.9	
		4-22-64	34.1	130.9	
		5-20-64	34.7	130.3	
		6-26-64			
15S/16E-20R01 M	171.0	7-16-63	70.9	100.1	5000
		8-13-63	76.2	94.8	
		9-11-63	88.4	82.6	
		10-09-63	69.9	101.1	
		11-04-63	64.9	106.1	
		12-05-63	59.7	111.3	
		12-17-63	58.5	112.5	
		1-06-64	57.3	113.7	
		2-06-64	74.7	96.3	
		2-11-64	78.6	92.4	6001
		3-05-64	76.9	94.1	5000
		3-31-64	78.1	92.9	
		4-30-64	69.1	101.9	
		6-24-64	70.9	100.1	
15S/16E-28A04 M	170.0	7-16-63	167.8	2.2	5000
		8-13-63	169.8	0.2	
		9-10-63	173.3	3.3	
		10-09-63	173.8	3.8	
		11-12-63	172.4	2.4	
		12-12-63	171.7	1.7	
		1-29-64	165.9	4.1	
		2-20-64	167.5	2.5	
		3-19-64	171.4	1.4	
		4-22-64	172.6	2.6	
		5-20-64	172.8	2.8	
		6-26-64	173.5	3.5	
15S/16E-34E01 M	175.0	7-16-63	189.8	14.8	5000
		8-13-63	192.4	17.4	
		9-11-63	197.0	22.0	
		10-09-63	196.7	21.7	
		11-04-63	195.0	20.0	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
MENDOTA-HURON AREA					
5-22-47					
15S/16E-34E01 M CONT.	175.0	12-05-63 12-17-63 1-06-64 2-06-64 2-14-64 3-05-64 3-31-64 4-30-64 6-24-64	193.0 192.0 188.5 187.9 189.7 192.8 193.9 195.5 195.0	- - - - - - - - -	5000 6001 5000
16S/15E-02N02 M	219.0	12-17-63 2-13-64	76.0 94.5	143.0 124.5	5050 6001
16S/16E-10N01 M	191.0	12-16-63 2-11-64	107.7 139.6*	83.3 51.4	5050 6001
16S/16E-18N01 M	233.0	12-16-63 2-11-64	75.8 84.5	157.2 148.5	5050 6001
17S/14E-13R01 M	457.0	12-19-63	□		5050
17S/16E-02E01 M	218.0	12-19-63 2-11-64	□ 205.3	12.7	5050 6001
17S/16E-24R01 M	232.5	7-16-63 8-13-63 9-10-63 10-09-63 11-12-63 12-12-63 12-19-63 1-29-64 2-20-64 3-19-64 4-22-64 5-20-64 6-26-64	193.6* 197.6 201.9 187.5 179.2* 165.5 166.5 167.2 182.5 195.8* 188.4 184.2 195.7	38.9 34.9 30.6 45.0 53.3 67.0 66.0 65.3 50.0 36.7 44.1 48.3 36.8	5000 5050 5000
17S/16E-30A02 M	290.0	7-16-63 8-13-63 9-10-63 10-09-63 11-12-63 12-12-63 1-29-64	66.0 108.8* 66.1 66.8 66.1 65.6	224.0 181.2 223.9 223.7 223.2 223.9 224.4	5000

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
MENDOTA-HURON AREA					
5-22-47					
17S/16E-30A03 M CONT.	290.0	2-20-64 3-19-64 4-22-64 5-20-64 6-26-64	65.6 65.7 66.7 66.5 66.0	224.4 224.3 223.3 223.5 224.0	5000
17S/16E-30A05 M	290.0	7-16-63 8-13-63 9-10-63 10-09-63 11-12-63 12-12-63 1-29-64 2-20-64 3-19-64 4-22-64 5-20-64 6-26-64	387.8 397.2 375.7 366.2 379.4 363.0 373.0 371.9 369.1 370.9 371.3 375.1	- - - - - - - - - - - -	5000
17S/17E-21N02 M	226.0	12-22-63 6-24-64	261.0 315.0	35.0 89.0	5050 5000
18S/15E-02N01 M	429.0	7-16-63 8-13-63 9-10-63 10-09-63 11-12-63 12-12-63 1-29-64 2-19-64 3-19-64 4-22-64 5-20-64 6-26-64	837.2* 789.0 769.2 804.7 796.6 774.4 841.7 870.4 832.0 768.6 724.2 824.8	- - - - - - - - - - - -	5000
18S/15E-13N01 M	451.0	12-17-63	□		5050
18S/17E-12N01 M	253.0	12-17-63	319.2	66.2	5050
18S/17E-29N01 M	305.0	12-18-63	465.0	160.0	5050
18S/18E-07N01 M	249.0	12-19-63	□		5050
19S/17E-35N01 M	367.0	7-17-63 8-13-63	483.4 508.7	116.4 141.7	5000

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
MENDOTA-HURON AREA					
19S/17E-35N01 M CONT.	367.0	9-12-63 10-09-63 11-05-63 12-05-63 1-06-64 2-06-64 3-05-64 3-31-64 4-30-64 6-24-64	489.7 478.3 481.3 452.6 482.6 498.5 495.5 492.5 466.3 481.6	- 122.7 - 111.3 - 114.3 - 85.6 - 115.6 - 131.5 - 128.5 - 125.5 - 99.3 - 114.6	5000
19S/18E-15M01 M	274.0	12-18-63	364.0	- 90.0	5050
19S/18E-27M01 M	281.0	7-16-63 8-13-63 9-10-63 10-09-63 11-12-63 12-12-63 1-29-64 2-19-64 3-18-64 4-22-64 5-20-64 6-26-64	354.8 363.0 364.6 366.4 361.9 357.7 365.1 373.5 378.7 365.1 359.1 365.4	- 73.8 - 82.0 - 83.6 - 85.4 - 80.9 - 76.7 - 84.1 - 92.5 - 97.7 - 84.1 - 78.1 - 84.4	5000
20S/15E-17C01 M	806.0	7-01-63	#		5050
20S/15E-25D01 M	619.0	1-21-64	193.0	426.0	5050
20S/15E-32A01 M	675.0	7-17-63 8-14-63 9-12-63 10-09-63 11-05-63 12-05-63 1-06-64 1-21-64 2-06-64 3-05-64 3-31-64 4-30-64 6-25-64	217.3 217.9 218.6 219.1 219.5 220.0 219.9 219.9 219.9 220.1 220.3 220.8 221.6	457.7 457.1 456.4 455.9 455.5 455.0 455.1 455.1 455.1 454.9 454.7 454.2 453.4	5000
20S/18E-11N01 M	277.0	12-18-63	□		5050
MENDOTA-HURON AREA					
20S/18E-11O01 M	270.0	7-17-63 8-13-63 9-12-63 10-09-63 11-05-63 12-03-63 1-06-64 2-06-64 3-05-64 3-31-64 4-30-64 6-24-64	435.4 439.2 448.8 447.5 428.6 428.2 436.7 444.7 453.2 455.0 432.0 433.9	- 165.4 - 169.2 - 178.8 - 177.5 - 158.6 - 158.2 - 166.7 - 174.7 - 183.2 - 185.0 - 162.0 - 163.9	5000
20S/18E-36D01 M	260.0	7-16-63 8-13-63 9-10-63 10-09-63 11-12-63 12-12-63 12-18-63 1-29-64 2-19-64 3-18-64 4-22-64 5-20-64 6-26-64	290.7* 295.2 294.7 294.2 290.8 285.4 283.5 287.6* 292.3 295.8* 293.4* 291.3 292.9	- 30.7 - 35.2 - 34.7 - 34.2 - 30.8 - 25.4 - 23.5 - 27.6 - 32.3 - 35.8 - 33.4 - 31.3 - 32.9	5000
21S/15E-01E01 M	623.0	1-21-64	195.7	427.3	5050
21S/16E-02N01 M	570.0	1-20-64	□		5050
21S/16E-07N01 M	634.0	1-21-64	□		5050
21S/16E-35D01 M	682.0	1-20-64	□		5050
21S/17E-06N01 M	526.0	1-20-64	□		5050
21S/17E-11E01 M	415.0	12-17-63	□		5050
21S/17E-24G01 M	425.0	12-17-63	484.5	- 59.5	5050
21S/18E-02M01 M	278.0	12-18-63	□		5050
21S/18E-28M02 M	360.0	7-16-63 8-13-63	335.9 336.5	24.1 23.5	5000

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
MENDOTA-HURON AREA					
5-22-47					
21S/18E-28M02 M	360.0	9-10-63	326.5	33.5	5000
CONT.		10-09-63	321.2	38.8	
		11-12-63	314.4	45.6	
		12-12-63	321.6	38.4	
		1-29-64	324.9	35.1	
		2-19-64	327.3	32.7	
		3-18-64	328.2	31.8	
		4-22-64	325.6	34.4	
		5-20-64	331.1	28.9	
		6-26-64	333.4	26.6	
21S/18E-29N01 M	447.0	12-17-63	□		5050
22S/16E-12F01 M	787.0	1-20-64	298.0	489.0	5050
POSO SOIL CONSERVATION DISTRICT					
5-22-48					
10S/13E-06R01 M	110.0	9-24-63	7.2	102.8	5529
		10-25-63	7.7	102.3	
		11-19-63	8.6	101.4	
		12-23-63	8.4	101.6	
		1-25-64	8.8	101.2	
		4-06-64	6.3	103.7	
		5-04-64	6.4	103.6	
		6-03-64	5.4	104.6	
11S/13E-05O01 M	117.0	8-19-63	7.6	109.4	5529
		10-25-63	6.6	110.4	
		11-19-63	6.5	110.5	
		12-23-63	6.6	110.4	
		1-25-64	7.3	109.7	
		4-06-64	10.8	106.2	
		5-04-64	10.6	106.4	
		6-03-64	8.7	108.3	
11S/13E-26A01 M	128.0	9-24-63	16.5	111.5	5529
		10-25-63	10.2	117.8	
		11-19-63	10.0	118.0	
		12-23-63	9.7	118.3	
		1-25-64	10.5	117.5	
		4-06-64	11.0	117.0	
		5-04-64	6.5	121.5	
		6-03-64	8.9	119.1	
11S/13E-33L01 M	126.0	7-28-63	9.5	116.5	5529
MENDOTA-HURON AREA					
5-22-47					
21S/18E-28M02 M	360.0	9-10-63	326.5	33.5	5000
CONT.		10-09-63	321.2	38.8	
		11-12-63	314.4	45.6	
		12-12-63	321.6	38.4	
		1-29-64	324.9	35.1	
		2-19-64	327.3	32.7	
		3-18-64	328.2	31.8	
		4-22-64	325.6	34.4	
		5-20-64	331.1	28.9	
		6-26-64	333.4	26.6	
21S/18E-29N01 M	447.0	12-17-63	□		5050
22S/16E-12F01 M	787.0	1-20-64	298.0	489.0	5050
POSO SOIL CONSERVATION DISTRICT					
5-22-48					
10S/13E-06R01 M	110.0	9-24-63	7.2	102.8	5529
		10-25-63	7.7	102.3	
		11-19-63	8.6	101.4	
		12-23-63	8.4	101.6	
		1-25-64	8.8	101.2	
		4-06-64	6.3	103.7	
		5-04-64	6.4	103.6	
		6-03-64	5.4	104.6	
11S/13E-05O01 M	117.0	8-19-63	7.6	109.4	5529
		10-25-63	6.6	110.4	
		11-19-63	6.5	110.5	
		12-23-63	6.6	110.4	
		1-25-64	7.3	109.7	
		4-06-64	10.8	106.2	
		5-04-64	10.6	106.4	
		6-03-64	8.7	108.3	
11S/13E-26A01 M	128.0	9-24-63	16.5	111.5	5529
		10-25-63	10.2	117.8	
		11-19-63	10.0	118.0	
		12-23-63	9.7	118.3	
		1-25-64	10.5	117.5	
		4-06-64	11.0	117.0	
		5-04-64	6.5	121.5	
		6-03-64	8.9	119.1	
11S/13E-33L01 M	126.0	7-28-63	9.5	116.5	5529

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
TERRA BELLA IRRIGATION DISTRICT					
		5-22-50			
22S/27E-36N01 M	513.0	5-19-64	258.5	254.5	5000
CONT.		6-22-64	266.0	247.0	
23S/27E-10N01 M	518.0	9-23-63	252.0	266.0	6001
		2-03-64	225.5	292.5	
MERCED BOTTOMS					
		5-22-54			
7S/10E-23K01 M	80.0	7-02-63	5.6	74.4	5050
		8-05-63	11.9	68.1	
		9-04-63	15.1	64.9	
		10-04-63	19.1	60.9	
		11-05-63	15.5	64.5	
		12-04-63	12.6	67.4	
		1-02-64	10.0	70.0	
		2-04-64	7.0	73.0	
		3-02-64	5.7	74.3	
		4-02-64	6.2	73.8	
		5-04-64	8.7	71.3	
		6-04-64	11.2	68.8	
7S/10E-23K02 M	80.0	7-02-63	3.8	76.2	5050
		8-05-63	4.5	75.5	
		9-03-63	4.8	75.2	
		10-04-63	5.0	75.0	
		11-05-63	4.7	75.3	
		12-04-63	4.5	75.5	
		1-02-64	4.7	75.3	
		2-04-64	4.4	75.6	
		3-02-64	4.3	75.7	
		4-02-64	3.9	76.1	
		5-04-64	3.7	76.3	
		6-04-64	3.8	76.2	
9S/14E-01B01 M	180.0	7-02-63	52.8	127.2	5050
		8-05-63	85.6	94.4	
		9-04-63	87.7	92.3	
		10-04-63	88.6	91.4	
		11-05-63	60.0	120.0	
		12-04-63	52.8	127.2	
		1-02-64	49.5	130.5	
		2-05-64	46.7	133.3	
		3-02-64	50.6	129.4	
		4-02-64	59.0	121.0	
		5-04-64	71.4	108.6	
MERCED BOTTOMS					
		5-22-54			
9S/14E-01B01 M	180.0	6-04-64	79.4	100.6	5050
CONT.					
9S/14E-01B02 M	180.0	7-02-63	52.1	127.9	5050
		8-05-63	83.9	96.1	
		9-04-63	85.1	94.9	
		10-04-63	83.1	96.9	
		11-05-63	58.2	121.8	
		12-04-63	51.6	128.4	
		1-02-64	48.7	131.3	
		2-05-64	46.0	134.0	
		3-02-64	50.0	130.0	
		4-02-64	57.5	122.5	
		5-04-64	68.9	111.1	
		6-04-64	77.6	102.4	
9S/14E-01B03 M	180.0	7-02-63	32.6	147.4	5050
		8-05-63	32.1	147.9	
		9-04-63	32.2	147.8	
		10-04-63	32.0	148.0	
		11-05-63	33.6	146.4	
		12-04-63	34.2	145.8	
		1-02-64	34.5	145.5	
		2-05-64	34.2	145.8	
		3-02-64	34.5	145.5	
		4-02-64	34.5	145.5	
		5-04-64	34.6	145.4	
		6-04-64	34.9	145.1	
GARFIELD WATER DISTRICT					
		5-22-65			
12S/20E-13A01 M	390.0	10-06-63	115.9	274.1	6001
		10-31-63	115.2	274.8	
		11-30-63	113.0	277.0	
		12-31-63	114.5	275.5	
		1-31-64	112.3	277.7	
		2-15-64	112.0	278.0	
		4-01-64	114.2	275.8	
		4-22-64	115.2	274.8	
		6-01-64	116.7	273.3	
12S/21E-07A02 M	405.5	10-07-63	195.2	210.3	6001
		10-31-63	194.0	211.5	

TABLE C-1 (Cont.)

GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SUR- FACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA	STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SUR- FACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
GARFIELD WATER DISTRICT											
5-22-65											
12S/21E-07A02 M CONT.	405.5	11-30-63	191.8	213.7	6001						
		12-31-63	189.1	216.4							
		1-31-64	187.2	218.3							
		2-16-64	186.7	218.8							
		4-01-64	186.0	219.5							
		5-01-64	183.6	221.9							
		6-01-64	184.2	221.3							
12S/21E-18A03 M	390.5	10-06-63	112.0	278.5	6001						
		10-31-63	111.7	278.8							
		11-31-63	110.2	280.3							
		12-31-63	117.5	273.0							
		1-31-64	110.4	280.1							
		2-16-64	109.0	281.5							
		4-01-64	111.6	278.9							
		5-01-64	115.1	275.4							
		6-01-64	113.3	277.2							

APPENDIX D
SURFACE WATER QUALITY

Specific conductance is a measure of the capacity of water to conduct a current of electricity.

Coliform is a group of organisms whose presence is an indicator of bacteriological contamination or pollution of water.

Most probable number (MPN) is an index of the number of coliform bacteria which more probably than any other number would give the results shown by laboratory tests.

Hardness is a characteristic of water that determines its usefulness and economic value. It is mainly caused by compounds of magnesium and calcium and is usually recognized by the increased quantity of soap required to produce lather.

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INTRODUCTION

This appendix contains data pertaining to the quality of surface waters during the 1964 water year (October 1, 1963, to September 30, 1964). The data are presented as tables and graphs and represent the observed physical, chemical, and bacteriological characteristics of the waters collected at the surface water quality monitoring stations. These characteristics are analyzed according to "standard methods" and accuracy of the measurements are contained therein.

The stations are sampled periodically (monthly, quarterly, or semiannually), depending on past records, need, and the type of data required for each station. Samples collected and the field data obtained at the stations are as follows:

1. Partial mineral analysis-- $\frac{1}{2}$ gallon
2. Bacteriological analyses (coliform)--2 samples in 4 oz., sterilized bottles
3. Dissolved oxygen--D. O.
4. pH
5. Temperature
6. Gage height
7. Time
8. Visual observation of water conditions

In May and September, the partial mineral analysis is replaced by a complete mineral analysis and the following are added to the list above:

1. Radiological analysis
2. Phosphate, arsenic, and detergents (ABS)
3. Spectrographic analysis of heavy metals (for ten selected stations)

Continuous conductivity recorders are installed at nine of the surface water quality monitoring stations. The recorders measure specific electrical conductance, a characteristic of water which provides an approximation of the quantity of minerals in solution.

Explanation of Tables

An alphabetical listing of all stations in the surface water monitoring program is found in Table D-1 along with information concerning station number, location, period of record, frequency of sampling, and agency responsible for collection of samples.

Results of mineral analyses can be found in Table D-2, where mineral concentrations, dissolved oxygen, and ABS are expressed in parts per million (ppm). Discharges are expressed as cubic feet per second (cfs) and bacteriological determinations are expressed as the most probable number (MPN) of coliform bacteria per milliliter of sample.

Results of spectrographic analyses for heavy metals, found in Table D-3, are expressed as parts per billion.

Table D-4 contains results of radiological analyses, expressed as picocuries per liter (pc/l).

Explanation of Plates

Locations of surface water quality stations and recorder sites are depicted on Figure D-1.

Figure D-2 presents, in graphical form, data obtained from electrical conductivity recorders in terms of mean weekly values of electrical conductivity ($EC \times 10^6$ micromhos) plotted against time (week).

Explanation of Terms and Abbreviations

Cubic foot per second (cfs) is the unit rate of discharge of water. It is a cubic foot of water passing a given point in one second.

Dissolved oxygen (DO) is the amount of free oxygen contained in water. It is one of the most important indicators of the condition of a water supply.

Total dissolved solids (TDS) represents the quantity of dissolved mineral constituents in water.

Specific conductance is a measure of the capacity of water to conduct a current of electricity.

Coliform is a group of organisms whose presence is an indicator of bacteriological contamination or pollution of water.

Most probable number (MPN) is an index of the number of coliform bacteria which more probably than any other number would give the results shown by laboratory tests.

Hardness is a characteristic of water that determines its usefulness and economic value. It is mainly caused by compounds of magnesium and calcium and is usually recognized by the increased quantity of soap required to produce lather.

Location of Surface Water Quality Sampling Stations (See Figure D-1)

<u>Station name</u>	<u>Station number</u>
San Joaquin River at Friant Dam	24
Salt Slough at San Luis Ranch	24c
San Joaquin River near Mendota	25
San Joaquin River at Fremont Ford Bridge ²	25c
San Joaquin River near Grayson	26
San Joaquin River at Maze Road Bridge ²	26a
San Joaquin River at Crows Landing Bridge	26b
San Joaquin River near Vernalis ²	27
San Joaquin River at Patterson Bridge ²	27a
Stanislaus River at Koetitz Ranch ²	29
Stanislaus River below Tulloch Dam	29a
Tuolumne River at Hickman Bridge ²	30
Tuolumne River at Tuolumne City ²	31
Tuolumne River below Don Pedro Dam	31a
Merced River near Stevinson ²	32
Merced River below Exchequer Dam	32a
Kings River below Pine Flat Dam	33b
Kings River below North Fork	33c
Big Creek above Pine Flat Dam	33d
Kings River below Peoples Weir	34
Kaweah River below Terminus Dam	35
Kaweah River near Three Rivers	35b
Kern River near Bakersfield	36
Kern River below Isabella Dam	36a
Kern River at Kernville	36b
Tule River below Success Dam	91
Tule River near Springville	91b
Delta-Mendota Canal near Mendota	92
Delta-Mendota Canal near Tracy ^{1,2}	93
Fresno River near Daulton	113
Chowchilla River near Raymond	114

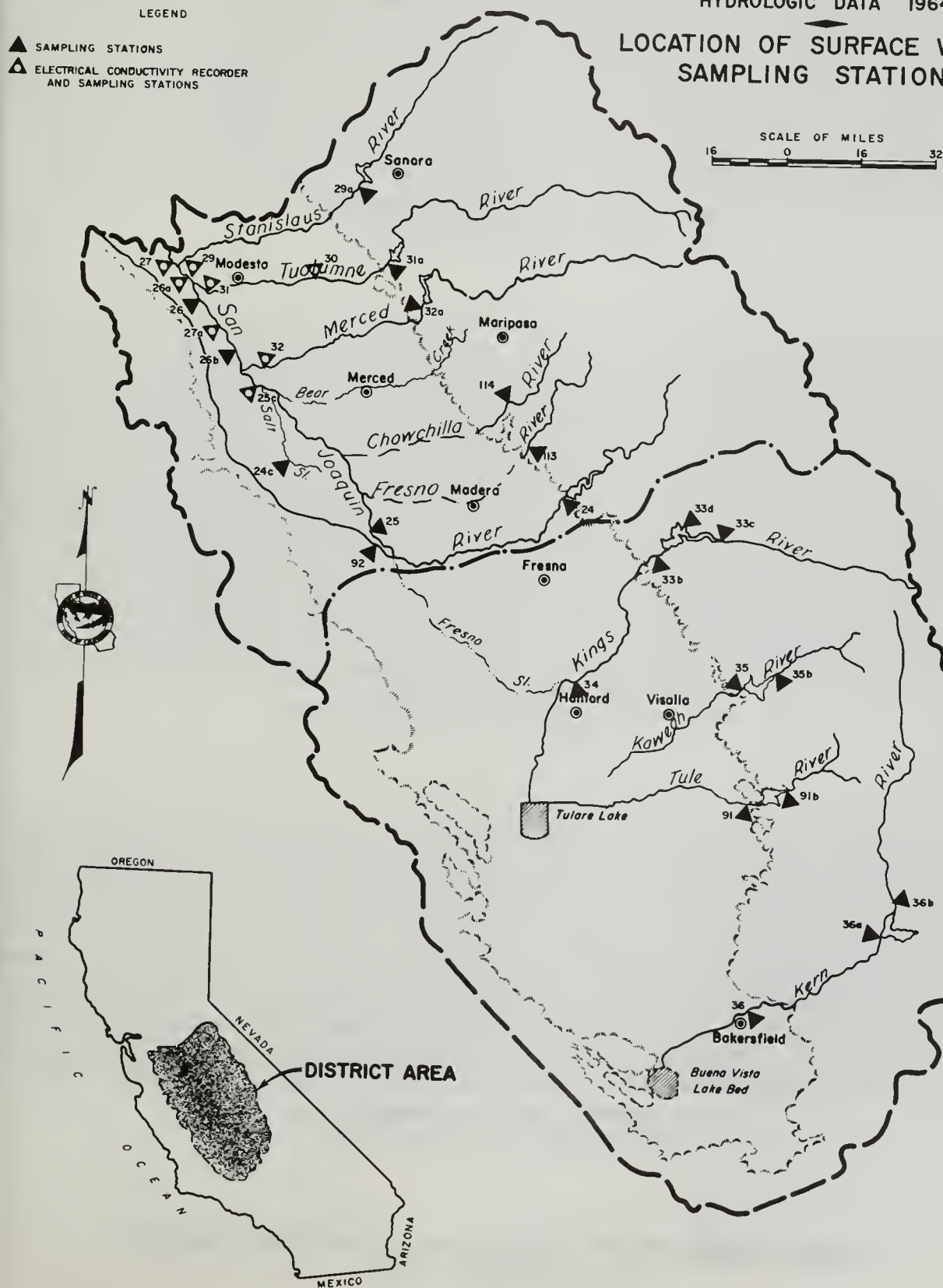
1 Not shown on plate, station is outside of branch boundary. Originally monitored by Delta Branch transferred to San Joaquin District as of July 1, 1963.

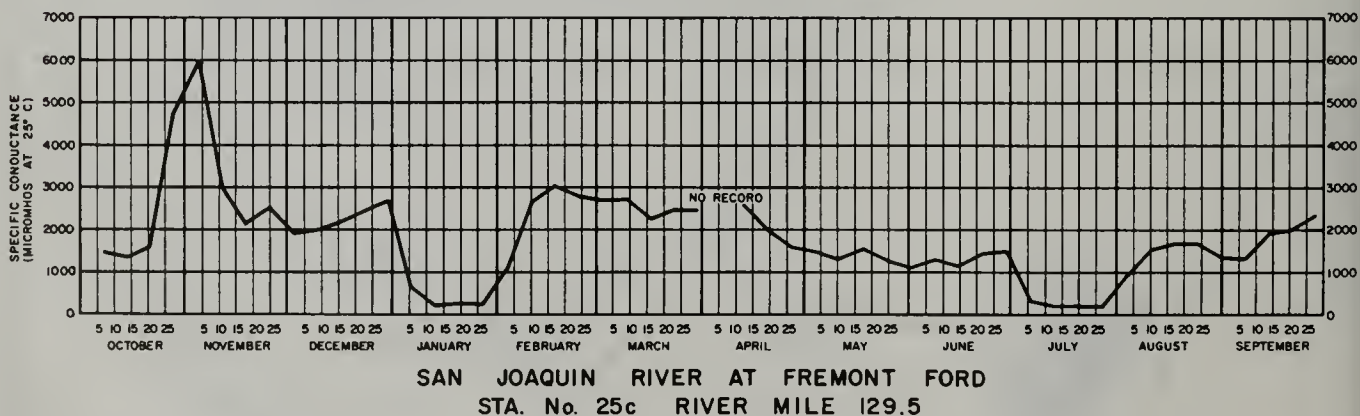
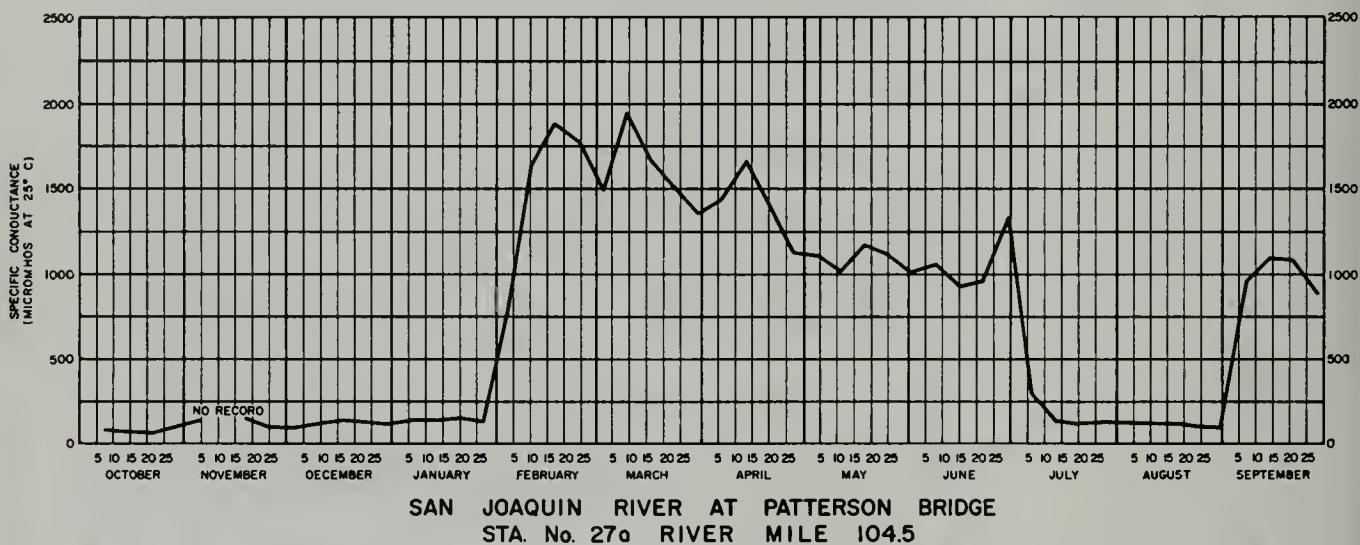
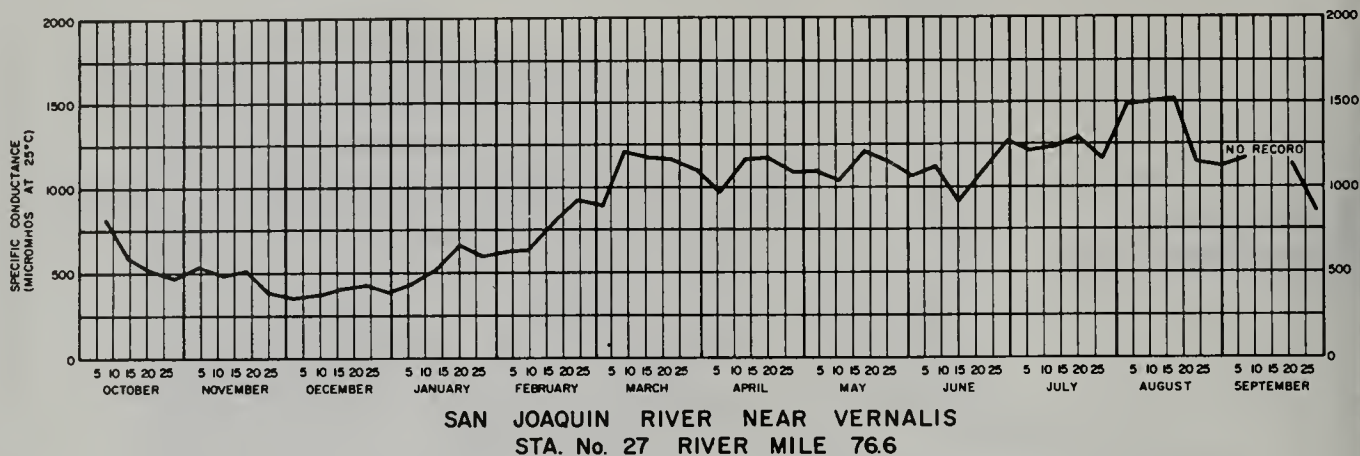
2 Conductivity recorder installed at this surface water station.

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN JOAQUIN DISTRICT

HYDROLOGIC DATA 1964

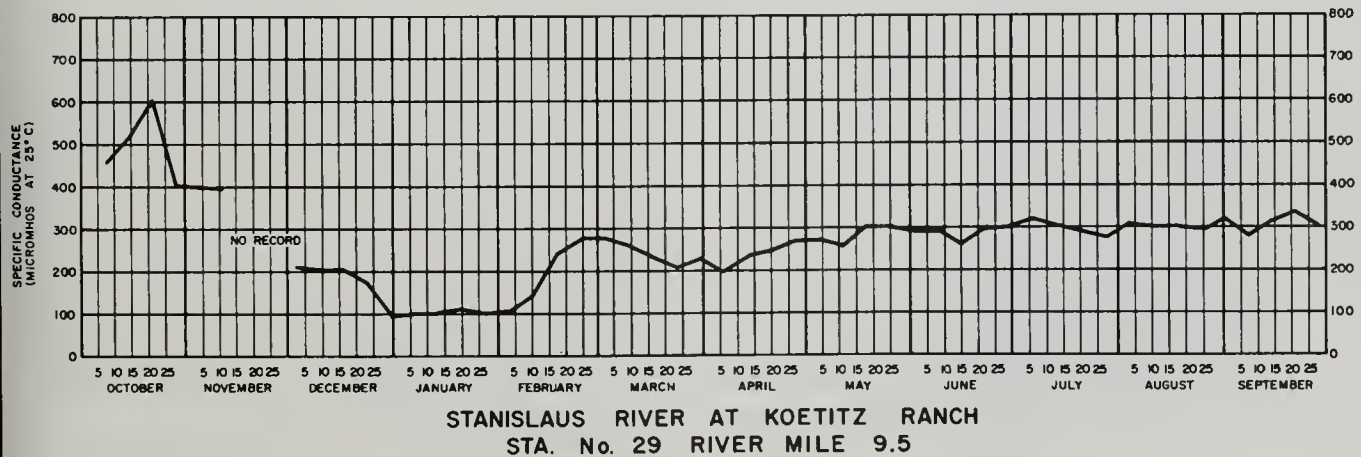
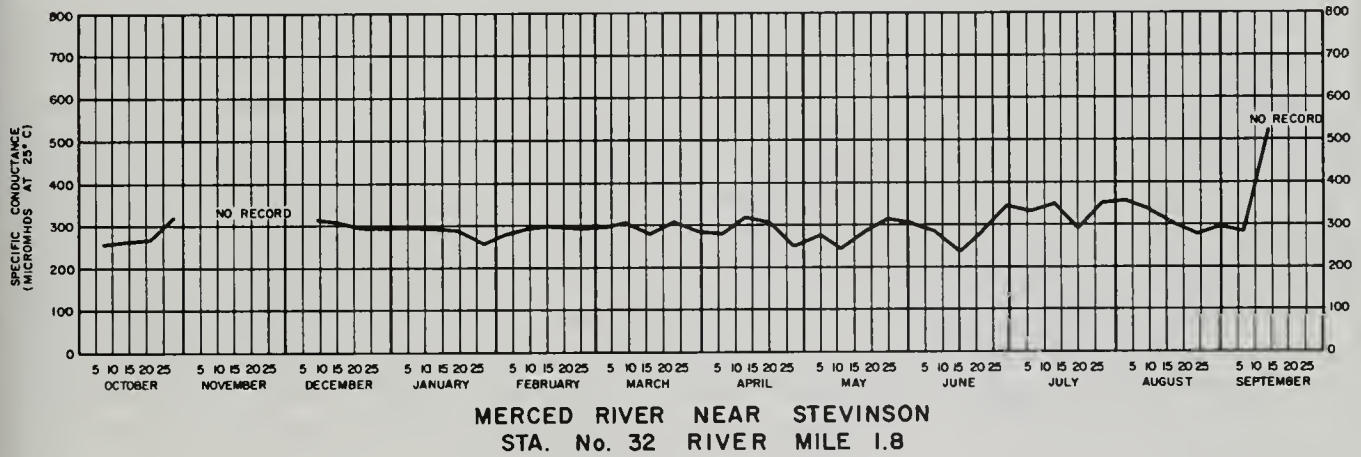
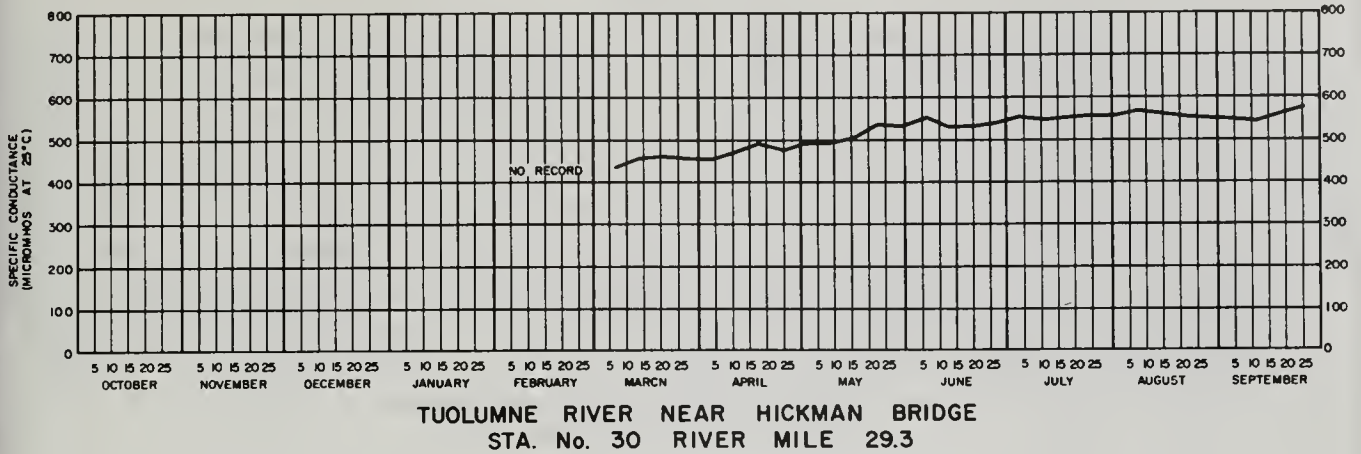
LOCATION OF SURFACE WATER
SAMPLING STATIONS





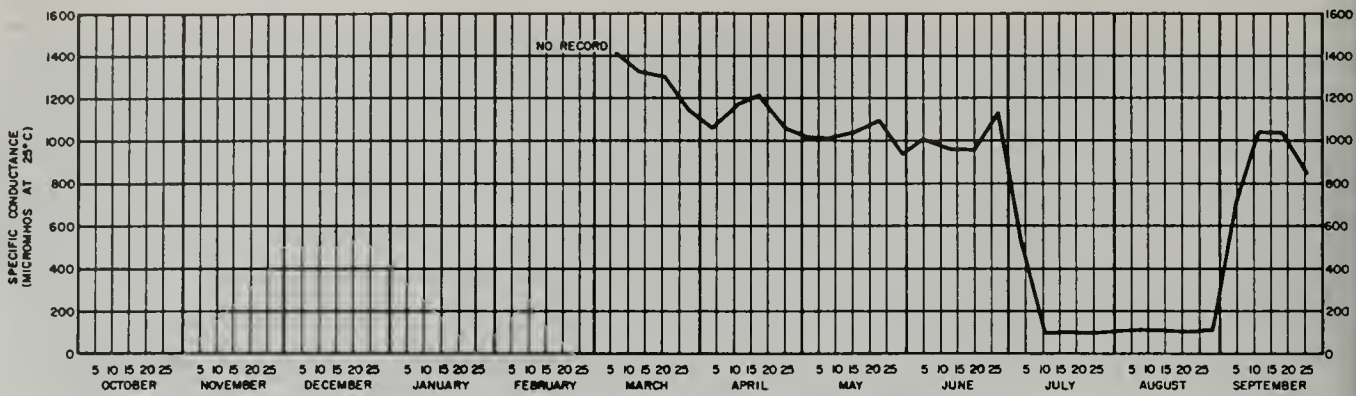
WEEKLY MEAN SPECIFIC CONDUCTANCE AT SELECTED STATIONS
SAN JOAQUIN VALLEY

1964

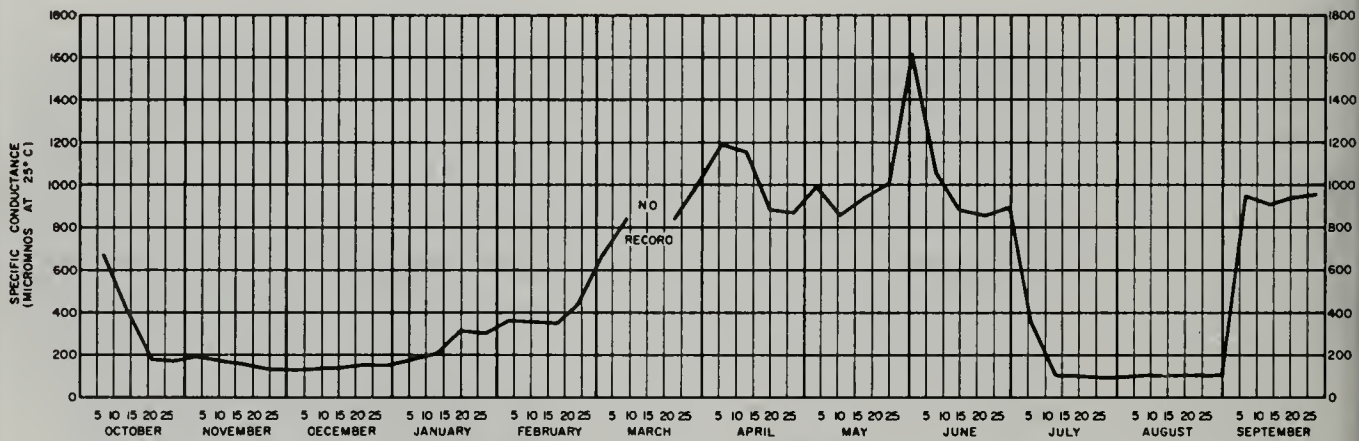


WEEKLY MEAN SPECIFIC CONDUCTANCE AT SELECTED STATIONS
SAN JOAQUIN VALLEY

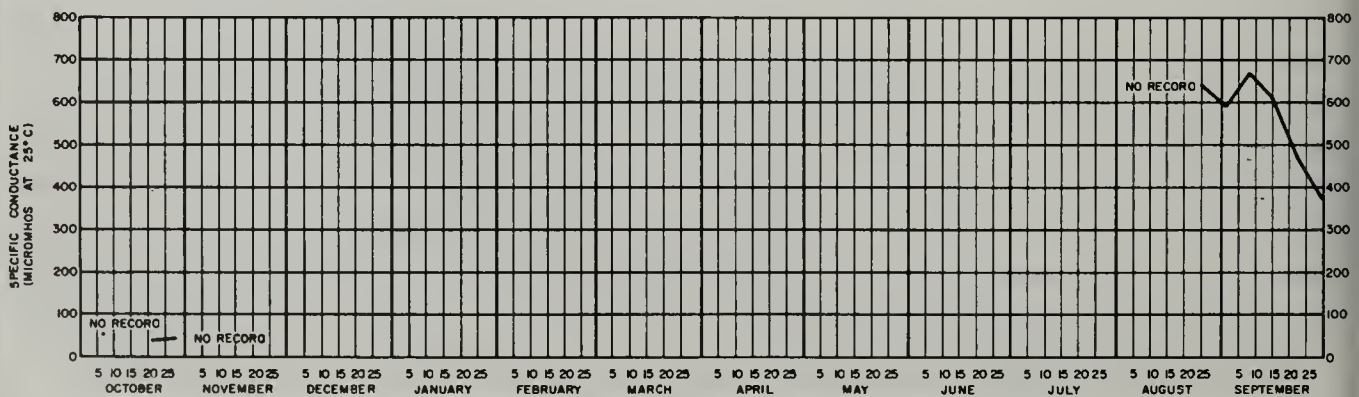
1964



SAN JOAQUIN RIVER AT MAZE RD. BRIDGE
STA. No. 26a RIVER MILE 82.9



TUOLUMNE RIVER NEAR TUOLUMNE CITY
STA. No. 31 RIVER MILE 2.9



DELTA MENDOTA CANAL NEAR TRACY
STA. No. 93 CANAL MILE 3.5

WEEKLY MEAN SPECIFIC CONDUCTANCE AT SELECTED STATIONS
SAN JOAQUIN VALLEY

1964

TABLE D-1
SAMPLING STATION DATA AND INDEX
FOR
SURFACE WATER

Station	Station Number	Location ^a	Period of Record ^b	Frequency of Sampling ^c	Sampled by ^d	Analysis on page
Big Creek above Pine Flat Dam	33d	12S/25E-4	July 1960	M	USACE	224, 256
Chowchilla River near Raymond	114	8S/18E-1	January 1962	S	DWR	225, 256
Delta-Mendota Canal near Mendota	92	13S/15E-19	July 1952	M	DWR	226, 255, 256
Delta-Mendota Canal near Tracy	93	1S/4E-30	July 1952	M	DWR	227, 255, 256
Fresno River near Daulton	113	9S/19E-34	January 1958	S	DWR	228, 256
Kaweah River below Terminus Dam	35	17S/27E-25	September 1961	M	USACE	229, 256
Kaweah River near Three Rivers	35b	17S/28E-27	April 1951	M	USACE	230, 256
Kern River near Bakersfield	36	29S/28E-9	April 1951	M	KCPR	231, 256
Kern River below Isabella Dam	36a	26S/33E-30	September 1955	Q	USACE	232, 255, 256
Kern River at Kernville	36b	25S/33E-15	September 1955	Q	USACE	233, 256
Kings River below North Fork	33c	12S/26E-21	September 1955	Q	USACE	234, 256
Kings River below Peoples Weir	34	17S/22E-1	April 1951	M	DWR	235, 255, 256
Kings River below Pine Flat Dam	33b	13S/24E-2	September 1955	Q	USACE	236, 257
Merced River below Exchequer Dam	32a	4S/15E-13	April 1959	Q	DWR	237, 257
Merced River near Stevinson	32	6S/9E-36	April 1951	M	DWR	238, 255, 257
Salt Slough at San Luis Ranch	24c	9S/11E-7	November 1958	M	DWR	239, 257
San Joaquin River at Crows Land Bridge	26b	6S/9E-7	January 1962	M	DWR	240, 257
San Joaquin River at Fremont Ford Bridge	25c	7S/9E-24	July 1955	M	DWR	241, 257
San Joaquin River at Friant Dam	24	11S/21E-7	April 1951	Q	DWR	242, 255, 257
San Joaquin River near Grayson	26	4S/7E-24	April 1959	M	SF	243, 257
San Joaquin River at Maze Road Bridge	26a	3S/7E-33	April 1951	M	SF	244, 257
San Joaquin River near Mendota	25	13S/15E-7	April 1951	M	DWR	245, 257
San Joaquin River at Patterson Bridge	27a	5S/8E-15	January 1962	M	DWR	246, 257
San Joaquin River near Vernalis	27	3S/6E-13	April 1951	M	DWR	247, 255, 258
Stanislaus River at Koetitz Ranch	29	3S/7E-2	April 1951 ^e	M	DWR	248, 255, 258
Stanislaus River below Tulloch Dam	29a	1S/12E-1	July 1956	Q	DWR	249, 258
Tule River near Springville	91b	21S/29E-15	November 1963	M	USACE	250, 258
Tule River below Success Dam	91	21S/28E-35	July 1952 ^f	M	USACE	251, 255, 258
Tuolumne River below Don Pedro Dam	31a	3S/14E-20	April 1951	Q	SF	252, 258
Tuolumne River at Hickman Bridge	30	3S/11E-34	April 1951	M	SF	253, 258
Tuolumne River at Tuolumne City	31	4S/8E-12	April 1951	M	SF	254, 255, 258

a. Locations are in reference to Mt. Diablo Base and Meridian

b. Beginning of record

c. M - Monthly, B - Bimonthly, Q - Quarterly, S - Semiannually

d. DWR - Department of Water Resources

USACE - United States Army Corps of Engineers

SF - City & County of San Francisco

KCPR - Kern County Parks and Recreation

e. Prior to 2-7-64 station was located at river mile 1.9, location 3S/7E-17, and was called Stanislaus River near Mouth.

f. Formerly called Tule River near Porterville

TABLE D-2
ANALYSES OF SURFACE WATER

BIG CREEK ABOVE PINE FLAT DAM (STA. NO. 33d)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH $\frac{a}{b}$	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent calcium	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents ^d																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE D-2 (Cont.)

ANALYSES OF SURFACE WATER

CHOWCHILLA RIVER NEAR RAYMOND (STA. 10. 114)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a b	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by i		
			ppm	% Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents	
1963 10/7 0720	-	64	7.4	76	571	7.3 8.1	46.6 2.30	7.8 0.40	17 2.04	3.0 0.03	109 1.79	2.0 0.04	110 3.36	1.1 0.02	0.3 0.02	0.1 0.01	23	ABS PO ₄ As	0.0 0.00 0.00	147	58	1	Median 2.3 Maximum 6.2 Minimum .05	USGS	
1964 5/11 0910	39.4	66	-	-	188	7.6 8.3	17 0.85	3.3 0.27	14 0.51	1.7 0.04	1 0.03	75 1.25	6.0 0.12	12 0.34	4.9 0.08	0.0 0.00	0.0 0.00	28	ABS PO ₄ As	0.0 0.10 0.00	56	0	1		
9/14	Dry																								

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE D-2 (Cont.)

ANALYSES OF SURFACE WATER

DELTA-MENDOTA CANAL NEAR MENDOTA (STA. NO. 92)

Date and time sampled P.S.T.	Orchorage in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (micromhos at 25°C)	pH $\frac{a}{b}$	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform ^b MPN/ml	Analyzed by ⁱ					
						equivalents																Silico (SiO ₂)	Other constituents ^d			
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)									Boron (B)		
1963																										
10/8 0710		71	6.9	78	678	7.4 8.1	$\frac{72}{3.13}^c$			$\frac{0.0}{0.00}$	$\frac{144}{2.31}$		$\frac{105}{2.96}$			$\frac{0.1}{}$					72	161	45	25	Median 6.2 Maximum 50 Minimum .06	USGS
11/4 0920		61	8.5	87	628	7.3 7.8	$\frac{66}{2.87}^c$			$\frac{0.0}{0.00}$	$\frac{110}{1.86}$		$\frac{90}{2.54}$			$\frac{0.3}{}$					50	143	53	15		
12/9 0930		48	9.8	85	583	7.7 8.1	$\frac{65}{2.83}^c$			$\frac{0.0}{0.00}$	$\frac{98}{1.61}$		$\frac{86}{2.43}$			$\frac{0.3}{}$					52	131	51	10		
1964																										
1/13 0900		45	15.2	126	1390	8.4 8.3	$\frac{168}{7.31}^c$			$\frac{2.0}{0.07}$	$\frac{104}{1.70}$		$\frac{124}{3.50}$			$\frac{1.6}{}$					56	284	195	5		
2/10 0950		53	9.8	90	759	7.6 8.2	$\frac{75}{3.26}^c$			$\frac{0.0}{0.00}$	$\frac{118}{1.93}$		$\frac{111}{3.13}$			$\frac{0.4}{}$					49	168	71	15		
3/9 1045		52	10.6	96	551	7.7 7.8	$\frac{54}{2.35}^c$			$\frac{0.0}{0.00}$	$\frac{88}{1.44}$		$\frac{76}{2.14}$			$\frac{0.2}{}$					46	139	67	50		
4/13 0900		63	9.0	93	426	7.7 8.0	$\frac{38}{1.65}^c$			$\frac{0.0}{0.00}$	$\frac{88}{1.44}$		$\frac{53}{1.50}$			$\frac{0.2}{}$					41	120	48	40		
5/11 0830		66	9.1	97	559	8.1 7.9	$\frac{15}{1.24}^c$	$\frac{56}{2.44}$	$\frac{2.2}{0.06}$	$\frac{0.0}{0.00}$	$\frac{106}{1.74}$	$\frac{46}{0.96}$	$\frac{86}{2.43}$	$\frac{6.8}{0.11}$	$\frac{0.1}{0.01}$	$\frac{0.2}{}$	13 ABS PO ₄ As	$\frac{0.10}{0.35}$ $\frac{0.00}{0.00}$		47	137	50	30			
6/8 0945		69	7.7	85	282	7.6 8.0	$\frac{27}{1.17}^c$			$\frac{0.0}{0.00}$	$\frac{80}{1.31}$		$\frac{29}{0.82}$			$\frac{0.1}{}$					42	82	16	40		
7/13 0845		77	6.9	82	308	7.4 8.1	$\frac{30}{1.30}^c$			$\frac{0.0}{0.00}$	$\frac{88}{1.44}$		$\frac{34}{0.96}$			$\frac{0.0}{}$					43	85	13	60		
8/10 0840		74	7.3	85	463	7.6 8.1	$\frac{52}{1.88}^c$			$\frac{0.0}{0.00}$	$\frac{82}{1.34}$		$\frac{80}{2.26}$			$\frac{0.2}{}$					55	94	27	110		
9/14 0700		70	7.3	81	599	7.4 7.9	$\frac{15}{1.25}^c$	$\frac{70}{3.04}$	$\frac{2.8}{0.07}$	$\frac{0.0}{0.00}$	$\frac{95}{1.56}$	$\frac{45}{0.94}$	$\frac{104}{2.93}$	$\frac{1.4}{0.02}$		$\frac{0.2}{}$	14 ABS PO ₄ As	$\frac{0.1}{0.25}$ $\frac{0.00}{0.00}$		55	120	42	30			

o Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE D-2 (Cont.)
ANALYSES OF SURFACE WATER
DELTA-MENDOTA CANAL NEAR TRACY (STA. NO. 93)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	% Sol	Specific conductance (at 25°C) μmhos/cm	pH a b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by ⁱ			
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents
1963																									
10/9 0750	1640	70	7.8	88	818	7.5 8.2	3.72 ^c	86 3.74		0.0 0.00	158 2.54		133 3.75			0.2			461 ^e	50	186	56	15	Median 23. Maximum 230. Minimum 2.3	USGS
11/5 1340	0	59	9.0	89	680	7.4 8.2	3.03 ^c	73 3.18		0.0 0.00	110 1.80		109 3.02			0.5			383 ^e	51	152	62	9		
12/3 1320	0	44	4.3	35	522	7.1 7.9	2.28 ^c	57 2.46		0.0 0.00	94 1.54		75 2.12			0.3			294 ^e	52	114	37	20		
1964																									
1/7 1340	0	48	9.5	82	537	7.2 8.0	2.32 ^c	55 2.39		0.0 0.00	88 1.44		82 2.31			0.3			302 ^e	51	116	44	15		
2/5 0930	860	50	9.5	84	696	7.4 8.5	3.10 ^c	82 3.57		8 0.27	98 1.61		108 3.05			0.4			392 ^e	54	155	62	5		
3/3 1410	2510	53	10.4	95	691	7.4 8.3	3.14 ^c	64 2.78		2.0 0.07	87 1.43		59 2.51			0.3			389 ^e	47	157	82	40		
4/8 0845	1704	58	9.5	94	383	7.5 8.1	2.13 ^c	34 1.48		0.0 0.00	84 1.38		44 1.24			0.2			216 ^e	40	109	40	35		
5/6 0945	3320	58	9.7	97	275	7.6 7.7	1.6 0.86	23 1.00	1.8 0.05	0.0 0.00	76 1.25	27 0.56	30 0.85	1.0 0.02	0.1 0.01	0.1	11	ABS PO ₄ As	164 ^g	37	82	20	40		
6/9 1330	3248	64	7.9	83	309	7.4 8.0	1.72 ^c	32 1.39		0.0 0.00	86 1.41		36 1.02			0.1			174 ^e	45	86	15	20		
7/7 1215	4075	73	7.1	82	287	7.5 8.3	1.60 ^c	27 1.17		1 0.03	85 1.39		30 0.85			0.1			162 ^e	42	80	9	35		
8/4 1310	--	75	6.9	81	469	7.4 8.2	2.02 ^c	50 2.13		0.0 0.00	84 1.38		84 2.37			0.1			264 ^e	52	101	32	30		
9/1 1345	2510	70	7.4	83	864	7.8 7.8	1.90	21 1.70	3.3 0.08	0.0 0.00	132 2.16	63 1.31	165 4.65	2.0 0.03	0.3	0.3	13	ABS PO ₄ As	484 ^g	54	180	72	20		

a Field pH
b Laboratory pH.
c Sum of calcium and magnesium in ppm.
d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)
e Derived from conductivity vs TDS curves.
f Determined by addition of analyzed constituents.
g Gravimetric determination.
h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.
i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE D-2 (Cont.)
ANALYSES OF SURFACE WATER
FRESNO RIVER NEAR DAWTON (STA. NO. 113)

Date and time sampled P.S.T.	Discharges in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micro-mhos at 25°C)	pH a b	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by			
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents	Total ppm	N.C. ppm
1963 10/7 0630	-	52	8.7	86	292	7.1 8.0	21.6 1.05	2.6 0.21	30 1.30	2.2 0.06	0.0 0.00	68 1.11	5.0 0.10	5.2 1.50	1.0 0.02	0.2 0.01	0.0 0.0	20	ABS PO ₄ As	0.0 0.00 0.01	50	68	7	1	Median .62 Maximum 6.2 Minimum .62	USGS
1964 5/11 0800	86	61	10.0	103	86	7.4 8.0	8.4 0.42	0.7 0.06	6.8 0.30	1.0 0.03	0.0 0.00	36 0.59	4.0 0.06	4.5 0.13	1.8 0.03	0.0 0.00	0.0 0.10 0.00	12	ABS PO ₄ As	0.0 0.10 0.00	37	24	0	7		
9/14	Dr7																									

o Field pH.
b Laboratory pH.
c Sum of calcium and magnesium in ppm.
d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)
e Derived from conductivity vs TDS curves
f Determined by addition of analyzed constituents.
g Gravimetric determination.
h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.
i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE D-2 (Cont.)

ANALYSES OF SURFACE WATER

KANEAH RIVER BELOW TERMINOUS DAM (STA. NO. 35)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F		Dissolved oxygen	Specific conductance (at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per- cent solids in ppm	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by					
		ppm	% Sat				Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonates (CO ₃)	Bicarbonates (HCO ₃)	Sulfates (SO ₄)	Chlorides (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents ^d		
1963																											
10/7 0845	80	62	5.2	55	104	6.9	0.80 ^c		4.0 0.17		0.0 0.00	53 0.87		3.2 0.09			0.1					79 ^e	18	40	0	7	Median 0.62
11/4 0930	--	61	8.4	85	117	7.2	0.90 ^c		4.4 0.19		0.0 0.00	59 0.97		5.2 0.15			0.0					88 ^e	17	45	0	1	Maximum 7. Minimum 0.62
12/5 0915	200	45	6.5	63	98	7.1	0.74 ^c		4.6 0.20		0.0 0.00	47 0.77		3.0 0.08			0.0					74 ^e	21	37	0	2	
1964																											
1/6 1115	110	45	11.5	95	105	8.1	0.80 ^c		5.5 0.24		0.0 0.00	55 0.90		3.5 0.10			0.0					75 ^e	23	40	0	2	
2/4 1330	170	44	11.0	97	113	7.0	0.90 ^c		5.7 0.25		0.0 0.00	57 0.93		5.2 0.15			0.0					85 ^e	22	45	0	1	
3/13 0930	210	45	13.5	112	111	7.5	0.88 ^c		5.8 0.25		0.0 0.00	56 0.92		5.0 0.14			0.0					76 ^e	22	44	0	5	
4/6 1015	--	47	13.0	111	87	7.3	0.64 ^c		5.1 0.22		0.0 0.00	43 0.70		1.5 0.04			0.0					66 ^e	26	32	0	4	
5/11 0830	--	57	15.0	145	62	7.5	0.40	0.7 0.06	2.9 0.13	1.0 0.03	0.0 0.00	33 0.54	1.0 0.02	1.0 0.03	0.6 0.01	0.0 0.00	0.1	1.3	ABS PO ₄ As		47 ^e	21	23	0	1		
6/10 0715	739	60	13.5	134	41	7.0	0.30 ^c		2.2 0.10		0.0 0.00	20 0.33		1.0 0.03			0.0					31 ^e	25	15	0	0	
7/6 1200	1038	65	11.9	125	54	6.7	0.42 ^c		2.6 0.11		0.0 0.00	25 0.41		1.0 0.03			0.0					41 ^e	21	21	1	1	
8/10 0820	80	76	11.0	130	82	7.0	0.63 ^c		3.7 0.16		0.0 0.00	41 0.67		2.0 0.06			0.0					52 ^e	20	32	0	7	
9/14 0945	38	76	12.8	150	108	7.5	0.60	5.3 0.20	5.2 0.23	2.1 0.05	0.0 0.00	53 0.87	3.0 0.06	3.6 0.10	4.3 0.07		0.3	6.4	ABS PO ₄ As		69 ^e	21	40	0	1		

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation Public Health Service (USPHS); Son Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE D-2 (Cont.)
ANALYSES OF SURFACE WATER
KANEAH RIVER NEAR THREE RIVERS (STA. NO. 35b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micro mhos at 25°C)	pH	Mineral constituents in equivalents per million								Total dis- solved solids in ppm	Per- cent soli- dum in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ						
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)							Nitrate (NO ₃)	Fluoride (F)		Boron (B)	Silica (SiO ₂)	Other constituents
<u>1963</u>																										
11/4 1000	80	58	9.0	88	121	7.8	0.94 ^c		5.2 0.23		0.0 0.00	63 1.03		5.8 0.16			0.0		47	0	1		Median 0.38 Maximum 0.60 Minimum 0.38	USGS		
12/5 1000	200	42	7.4	67	91	7.1	0.70 ^c		4.2 0.13		0.0 0.00	46 0.75		2.5 0.07			0.1		35	0	5					
<u>1964</u>																										
1/6 1025	75	39	12.8	97	109	7.2	0.86 ^c		6.1 0.27		0.0 0.00	54 0.89		4.8 0.14			0.0		40	0	0					
2/4 1000	170	44	11.0	90	100	7.1	0.76 ^c		5.7 0.25		0.0 0.00	49 0.86		4.6 0.13			0.0		38	0	2					
3/13 1015	210	44	14.5	118	103	7.5	0.86 ^c		6.0 0.26		0.0 0.00	52 0.85		4.0 0.11			0.0		40	0	10					
4/6 1055	-	44	14.0	114	84	7.7	0.64 ^c		4.8 0.21		0.0 0.00	42 0.69		2.5 0.07			0.0		32	0	2					
5/11 0910	-	59	13.2	128	50	7.5	0.30	1.0 0.08	2.7 0.12	0.8 0.02	0.0 0.00	25 0.41	1.0 0.02	1.0 0.03	4.2 0.07	0.1 0.01	0.1	12	ABS 0.0 POL 0.10 As 0.00	0	1					
6/10 0800	739	54	14.0	130	41	6.9	0.30 ^c		2.4 0.10		0.0 0.00	21 0.34		0.5 0.01			0.0		15	0	0					
7/6 1240	250	66	11.5	123	66	7.3	0.18 ^c		3.8 0.17		0.0 0.00	33 0.54		1.0 0.03			0.0		24	0	2					
8/10 0715	80	78	11.3	135	101	8.0	0.76 ^c		5.5 0.24		0.0 0.00	52 0.85		4.0 0.11			0.0		38	0	1					
9/14 1030	38	68	13.1	143	131	7.8	0.85	0.9 0.07	7.3 0.32	1.9 0.05	0.0 0.00	60 0.96	1.0 0.02	6.8 0.19	9.3 0.15		0.1	12	ABS 0.0 POL 0.00 As 0.00	0	1					

a Field pH.
b Laboratory pH.
c Sum of calcium and magnesium in ppm.
d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)
e Derived from conductivity vs TDS curves.
f Determined by addition of analyzed constituents.
g Gravimetric determination.
h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.
i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); Son Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE D-2 (Cont.)

ANALYSES OF SURFACE WATER

KERN RIVER NEAR BAKERSFIELD (STA. NO. 36)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhm/cm at 25°C)	pH	Mineral constituents in parts per million								Total dis- solved solids in ppm	Per- cent sed- ium in ppm	Hardness as CaCO ₃ in ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ		
			ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)							Ni- trate (NO ₃)	Fluo- ride (F)
1963																						
10/7 1000	1405	67	8.4	92	116	7.3 7.8	0.72 ^c	8.6 0.37		0.0 0.00	5.6 0.92	4.2 0.12		0.0		75 ^e	34	36	0	2	Median 2.4 Maximum 24 Minimum 0.23	USGS
11/6 1115	540	60	9.3	93	130	7.3 7.7	0.80 ^c	10 0.44		0.0 0.00	5.9 0.97	4.2 0.12		0.2		84 ^e	35	40	0	2		
12/9 0950	365	45	10.1	83	144	7.3 7.9	0.88 ^c	12 0.52		0.0 0.00	6.8 1.11	4.5 0.13		0.1		93 ^e	37	44	0	5		
1964																						
1/7 0930	318	42	-	-	154	8.2	0.90 ^c	13 0.57		0.0 0.00	7.2 1.18	5.8 0.16		0.1		99 ^e	39	45	0	0		
2/4 0945	425	43	-	-	158	8.0	0.96 ^c	12 0.52		0.0 0.00	7.3 1.20	5.8 0.16		0.2		102 ^e	35	48	0	2		
3/5 0915	469	46	-	-	168	8.0	1.02 ^c	14 0.61		0.0 0.00	7.6 1.25	6.0 0.17		0.1		108 ^e	37	51	0	2		
4/7 0915	444	51	-	-	172	7.6	1.04 ^c	15 0.65		0.0 0.00	8.0 1.31	5.5 0.16		0.2		111 ^e	38	52	0	2		
5/4 1120	447	52	-	-	166	7.9	0.80	14 0.61	2.0 0.05	0.0 0.00	7.5 1.23	7.2 0.20	1.0 0.02	0.4 0.02	2.3	99 ^e	37	50	0	7	ABS 0.0 PO ₄ 0.10 As 0.01	
6/1 0830	845	-	-	-	157	7.2	0.96 ^c	13 0.57		0.0 0.00	7.2 1.18	5.5 0.16		0.1		101 ^e	37	48	0	5		
7/1 0930	1422	68	-	-	138	6.9	0.80 ^c	12 0.52		0.0 0.00	6.0 0.98	4.5 0.13		0.1		89 ^e	39	40	0	1		
8/4 0900	656	70	-	-	140	7.4	0.84 ^c	12 0.52		0.0 0.00	6.8 1.11	4.0 0.11		0.1		90 ^e	38	42	0	3		
9/3 1300	218	70	-	-	158	7.8	0.70	14 0.61	1.6 0.04	0.0 0.00	7.0 1.15	4.9 0.14	1.1 0.02	0.1	2.6	87 ^e	38	47	0	1	ABS 0.0 PO ₄ 0.15 As 0.01	

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE D-2 (Cont.)
ANALYSES OF SURFACE WATER

KEEN RIVER BELOW ISABELLA DAM (STA. NO. 36a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (in cmhos at 25°C)	pH $\frac{a}{b}$	Mineral constituents in parts per million										Total dissolved solids in ppm	Per-cent solum	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by 1	
			ppm	% Sol			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents
1963 10/4 1330	1525	68	8.4	93	112	6.9	0.71 ^c	7.8 0.34		0.0 0.00	52 0.85		3.2 0.09			0.1				36	0	1	Median 0.23 Maximum 7. Minimum .02	USGS
1964 1/2 1100	3	47	10.4	89	148	7.2	0.92 ^c	12 0.52		0.0 0.00	69 1.13		5.0 0.14			0.2				46	0	5		
5/1 0915	5	54	9.0	84	161	7.7	1.4 0.80	16 0.61	1.8 0.05	0.0 0.00	76 1.25	10 0.21	5.5 0.16	1.0 0.02	0.0 0.00	0.1	7.4 0.05 As 0.01			49	0	1		
7/10 1330	790	67	8.4	92	130	7.9	0.80 ^c	11 0.48		0.0 0.00	60 0.98		3.0 0.08			0.1				40	0	2		
9/11 1115	5	71	7.9	90	151	7.9	1.0 0.50	13 0.57	2.5 0.06	0.0 0.00	68 1.11	9.0 0.19	5.1 0.14	6.9 0.11		0.1	12 0.15 As 0.02			44	0	1		

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in apm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE D-2 (Cont.)

ANALYSES OF SURFACE WATER

KERN RIVER AT KERNVILLE (STA. NO. 36b)

Date and time sampled P.S.T.	Discharges in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million								Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ in ppm		Tur- bid- ity in ppm	Coliform MPN/ml 24 hr. Maximum Minimum	Analyzed by				
			ppm	% Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)			Ni- trate (NO ₃)	Fluo- ride (F)				Boron (B)	Silica (SiO ₂)	Other constituents in ppm	
1963	295	60	9.0	90	114	7.3	^e 0.62	10 0.44		0.0 0.00	50 0.82		5.0 0.14			0.1			79 ^e	42	31	0	10	Median 2.4 Maximum 24. Minimum .09	USGS
10/4 1300																									
1964																									
5/1 0830	760	51	10.0	90	93	7.5	9.8 0.49	0.9 0.07	8.1 0.35	1.1 0.03	0.0 0.00	42 0.69	7.0 0.15	3.5 0.10	0.5 0.01	0.0 0.00	0.0	14 0.00	ABS 0.00 As 0.01	37	28	0	1		
7/10 1300	320	66	8.2	89	93	7.4	^c 0.51		8.8 0.36		0.0 0.00	39 0.64		2.5 0.07		0.1			65 ^e	43	26	0	1		
9/11 1030	110	64	8.4	88	180	8.2	15 0.75	3.8 0.31	16 0.70	2.4 0.06	0.0 0.00	83 1.36	11 0.23	7.2 0.20	4.5 0.07	0.2	15	ABS 0.1 PO ₄ As 0.01	38	53	0	2			

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)

e Derived from conductivity vs. TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE D-2 (Cont.)
ANALYSES OF SURFACE WATER
KINGS RIVER BELOW NORTH FORK (STA. NO. 33c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micro-mhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Ni- trate (NO ₃)	Fluoride (F)			Barium (Ba)	Silica (SiO ₂)			
<u>1963</u> 10/1 1220	328	66	10.4	111	47	<u>7.6</u>	<u>2.8</u> <u>0.12</u>				<u>0.0</u> <u>0.00</u>	<u>20</u> <u>0.33</u>		<u>2.0</u> <u>0.06</u>			<u>0.0</u>	0	2	Median 0.23 Maximum 0.62 Minimum 0.23	USGS		
<u>1964</u> 1/13 1150	303	40	10.6	82	55	<u>7.7</u>	<u>2.6</u> <u>0.11</u>				<u>0.0</u> <u>0.00</u>	<u>23</u> <u>0.36</u>		<u>2.0</u> <u>0.06</u>				0	2				
5/11 0945	2116	56	12.2	118	29	<u>7.4</u>	<u>2.4</u> <u>0.10</u>	<u>0.2</u> <u>0.02</u>		<u>0.7</u> <u>0.02</u>	<u>0.0</u> <u>0.00</u>	<u>15</u> <u>0.25</u>	<u>0.0</u> <u>0.00</u>	<u>0.5</u> <u>0.01</u>	<u>1.0</u> <u>0.02</u>	<u>0.0</u> <u>0.00</u>	<u>0.0</u> <u>0.00</u>	0	1				
7/13 1030	896	70	8.5	95	31	<u>6.9</u>	<u>2.3</u> <u>0.10</u>				<u>0.0</u> <u>0.00</u>	<u>12</u> <u>0.20</u>		<u>0.5</u> <u>0.01</u>			<u>0.0</u>	0	1				
9/14 1100	182	68	10.1	112	55	<u>7.6</u>	<u>4.8</u> <u>0.24</u>	<u>12</u> <u>0.16</u>		<u>0.7</u> <u>0.02</u>	<u>0.0</u> <u>0.00</u>	<u>21</u> <u>0.34</u>	<u>3.0</u> <u>0.06</u>	<u>2.0</u> <u>0.06</u>	<u>0.1</u> <u>0.00</u>		<u>0.2</u>	0	1				
																	<u>1.3</u>						
</																							

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE D-2 (Cont.)

ANALYSES OF SURFACE WATER

KINGS RIVER BELOW PEOPLES WEIR (STA. NO. 34)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm N.C. ppm	Tur- bid- ity in ppm	Coliform MPN/ml Maximum Minimum .002	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trote (NO ₃)	Fluo- ride (F)							Boron (B)	Silico (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE D-2 (Cont.)
ANALYSES OF SURFACE WATER

KINGS RIVER BELOW FINE FLAT DAM (STA. NO. 336)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (micromhos at 25°C)	pH $\frac{a}{b}$	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sed- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by			
						equivalents												Silica (SiO ₂)	Other constituents						
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)								Boron (B)		
1963 10/1 1400	787	60	10.2	102	7.6	$\frac{c}{0.15}$		$\frac{1.2}{0.05}$		$\frac{0.0}{0.00}$	$\frac{9}{0.15}$		$\frac{0.9}{0.03}$			$\frac{0.0}{0.00}$			17 ^e	25	8	1	10	Median 0.23 Maximum 4.5 Minimum 0.06	USGS
1964 1/13	615	50	10.6	94	7.5	$\frac{c}{0.24}$		$\frac{1.1}{0.05}$		$\frac{0.0}{0.00}$	$\frac{14}{0.23}$		$\frac{0.5}{0.01}$			$\frac{0.0}{0.00}$			25 ^e	17	12	1	3		
5/11 1310	1565	54	12.0	96	7.3	$\frac{4.8}{0.24}$	$\frac{0.2}{0.02}$	$\frac{2.3}{0.10}$	$\frac{0.7}{0.02}$	$\frac{0.0}{0.00}$	$\frac{19}{0.31}$	$\frac{3.0}{0.06}$	$\frac{0.5}{0.00}$	$\frac{0.2}{0.00}$		$\frac{0.0}{0.00}$	$\frac{7.4}{ABS}$ $\frac{FO_4}{0.05}$ $\frac{As}{0.00}$		30 ^g	26	13	0	2		
7/13 1350	4670	60	10.5	107	7.5	$\frac{c}{0.17}$		$\frac{1.8}{0.08}$		$\frac{0.0}{0.00}$	$\frac{11}{0.18}$		$\frac{0.5}{0.01}$			$\frac{0.0}{0.00}$			19 ^e	32	8	0	1		
9/14 1300	1871	70	10.1	113	7.0	$\frac{3.2}{0.16}$	$\frac{1.0}{0.08}$	$\frac{2.0}{0.09}$	$\frac{0.1}{0.00}$	$\frac{0.0}{0.00}$	$\frac{15}{0.25}$	$\frac{1.0}{0.02}$	$\frac{0.8}{0.02}$	$\frac{2.9}{0.05}$		$\frac{0.1}{6.2}$ $\frac{ABS}{FO_4}$ $\frac{As}{0.00}$		28 ^g	27	12	0	2			

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); Son Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE D-2 (Cont.)

ANALYSES OF SURFACE WATER

MERCED RIVER BELOW EXCHERQUER DAM (STA. NO. 32a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhm/cm at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by ¹				
						equivalents												Other constituents								
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ates (CO ₃)	Bicar- bonates (HCO ₃)	Sul- fates (SO ₄)	Chlo- rides (Cl)	Ni- tro- gen (NO ₃)	Fluo- ride (F)				Boron (B)				Silico- nium (SiO ₂)			
1963	52	69	8.0	89	62	6.9 7.4	c 0.50	1.9 0.08		30 0.19			1.8 0.05			0.0				41 ^e	14	25	0	20	Median 1.3 Maximum 62. Minimum 0.23	USGS
10/7 0945																										
1964	51	47	11.4	97	68	7.0 6.8	c 0.52	3.2 0.14		0.0 0.00	30 0.19		2.5 0.07			0.0				44 ^e	21	26	1	7		
5/11 1120	1327	54			40	7.0 7.2	4.4 0.22	2.4 0.10	0.6 0.02	0.0 0.00	19 0.31	3.0 0.06	1.0 0.03	0.3 0.00		0.0 0.00	0.1	10	ABS PO ₄ As	33 ^g	24	15	0	1		
7/13 1035	1816	59	10.4	104	27	6.9 7.5	c 0.19	1.8 0.08		0.0 0.00	12 0.20		1.8 0.03			0.0	0.0			18 ^e	30	10	0	2		
9/14 0910	46	70	7.0	78	220	6.7 7.7	28 1.40	6.1 0.27	2.7 0.07	0.0 0.00	109 1.79	6.0 0.12	6.7 0.19	6.2 0.10		0.2	13	ABS PO ₄ As	143 ^g	12	97	8	20			

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

ANALYSES OF SURFACE WATER

ANALYSES OF SURFACE WATER

MERCED RIVER NEAR STEVINSON (STA. NO. 32)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃	Turbidity in ppm	Coliform MPN/ml	Analyzed by ¹				
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents	
1963																										
10/8 1000	246.4	68	8.2	90	224	7.1 7.9	1.29 ^c		20 0.37		0.0 0.00	104 1.76		13 0.37				0.0	144 ^e	40	64	0	10	Median 32. Maximum 620. Minimum 2.3	USGS	
11/5 0955	116	60	9.2	92	314	7.3 8.0	1.84 ^c		29 1.26		0.0 0.00	143 2.34		19 0.54			0.0	202 ^e	41	92	0	2				
12/3 1010	172	45	9.4	78	288	7.3 8.3	1.72 ^c		26 1.13		2 0.07	129 2.11		14 0.39			0.1	185 ^e	40	86	0	5				
1964																										
1/7 0950	140	52	9.7	87	297	7.4 8.5	1.72 ^c		26 1.13		4 0.13	126 2.07		18 0.51				0.0	191 ^e	40	86	0	5			
2/4 0940	103	52	10.6	96	281	7.4 8.2	1.66 ^c		30 1.30		0.0 0.00	126 2.07		16 0.45				0.1	181 ^e	44	83	0	2			
3/3 0920	82	49	10.7	94	330	7.8 8.3	1.82 ^c		34 1.48		1 0.03	138 2.26		22 0.62				0.1	213 ^e	45	91	0	2			
4/7 0945	96	61	9.9	100	248	7.6 8.1	1.44 ^c		25 1.09		0.0 0.00	116 1.90		12 0.34				0.0	160 ^e	43	72	0	7			
5/5 0810	103	58	9.7	94	242	7.4 7.9	0.90		6.6 0.34	2.0 0.05	0.0 0.00	108 1.77	10 0.21	14 0.39	5.8 0.09	0.1 0.01	0.0	ABS PO ₄ As	151 ^e	40	72	0	10			
6/9 0810	118	63	8.4	87	231	7.8 8.2	1.32 ^c		22 0.96		0.0 0.00	102 1.67		14 0.39				0.0	149 ^e	42	66	0	6			
7/7 0600	98	71	7.7	86	297	7.3 8.0	1.58 ^c		31 1.35		0.0 0.00	123 2.02		10 0.28				0.1	191 ^e	46	79	0	5			
8/4 0830	93	71	6.6	75	316	7.1 8.0	1.66 ^c		34 1.48		0.0 0.00	130 2.13		25 0.71				0.0	204 ^e	47	83	0	4			
9/1 0840	166	65	9.2	97	189	7.3 7.6	0.75		16 0.70	2.7 0.07	0.0 0.00	90 1.48	7.0 0.15	7.1 0.20	3.6 0.06			0.0	ABS PO ₄ As	124 ^e	37	56	0	9		

i Mineral analyses made by United States Geological Survey, quality of water bronch (USGS); United States Department of Public Health (LADPH). City of Long Beach, Department of Water (WWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH). City of Long Beach, Department of Water (WWD).

TABLE D-2 (Cont..)

ANALYSES OF SURFACE WATER

SALT SLOUGH AT SAN LUIS RANCH (STA. NO. 24c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
			ppm	% Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ates (CO ₃)	Bicar- bonates (HCO ₃)	Sul- fates (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents d																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE D-2 (Cont.)
ANALYSES OF SURFACE WATER
SAN JOAQUIN RIVER AT CROW'S LANDING BRIDGE (STA. NO. 26b)

Date and time sampled P.S.T.	Discharge in cfs in of Gage off	Temp in of	Dissolved oxygen		Specific conductance (micro-mhos at 25°C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent solids in ppm	Hardness as CaCO ₃ Total ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by
			ppm	% Sat		Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonates (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)				
1963																					
10/8 1030		69	7.5	83	629	7.5 7.9		70 3.04		0.0 0.00	146 2.39		92 2.60			0.1			21	25	USGS
11/5 1030		59	9.4	94	1300	7.5 8.1		154 6.70		0.0 0.00	196 3.21		210 5.92			0.4			105	15	Maximum 2400.
12/3 1035		44	9.1	75	1260	7.3 8.2		158 6.87		0.0 0.00	206 3.38		150 5.36			0.8			95	20	Minimum 6.2
1964																					
1/7 1025		48	10.5	91	1400	7.7 8.2		158 6.87		0.0 0.00	232 3.80		203 5.73			0.8			56	15	
2/4 1015		52	10.0	91	1590	8.0 8.1		210 9.14		0.0 0.00	208 3.41		228 6.43			1.1			320	149	
3/3 1000		50	11.2	99	2000	8.2 8.3		280 12.16		4 0.13	206 3.38		325 9.17			1.3			408	233	
4/7 1010		64	11.0	115	1720	8.4 8.2		186 8.09		0.0 0.00	194 3.18		300 8.46			0.2			358	199	
5/5 0845		58	9.8	96	994	8.0 7.6	24 1.93	122 5.31	3.4 0.09	0.0 0.00	164 2.69	564 2.37	150 4.23	3.4 0.05	0.1 0.01	0.4		20	80	40	
6/9 0840		63	9.5	98	1220	8.0 8.3		155 6.74		4 0.13	162 2.66		206 5.81			0.4			256	117	
7/7 0840		73	9.2	106	1320	8.4 8.5		164 7.13		5 0.17	181 2.97		231 6.52			0.4			283	126	
8/4 0905		72	8.8	99	1260	8.2 7.9		147 6.39		0.0 0.00	188 3.08		212 5.98			0.3			264	110	
9/1 0910		63	9.7	99	947	8.0 7.8	22 1.80	110 4.78	3.7 0.07	0.0 0.00	174 2.85	7.9 1.64	154 4.34	4.9 0.08		0.3	25	205	62	20	

a Field pH.
b Laboratory pH.
c Sum of calcium and magnesium in ppm.
d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)
e Derived from conductivity vs TDS curves.
f Determined by addition of analyzed constituents.
g Gravimetric determination.
h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.
i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE D-2 (Cont.)

ANALYSES OF SURFACE WATER

SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE (STA. NO. 25c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	%Sat	Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent solids in ppm	Hardness as CaCO ₃ ppm	Tur- bidity in ppm	Coliform ^h MPN/ml	Analyzed by	
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)
1963																							
10/8 0930	94.8	68	7.4	82	1250	7.4	148 5.24 ^c		148 6.44		10 0.17	173 2.84	95 1.98	230 6.49			0.3		262	112	30	Median 23.	
11/5 0915	112	58	9.1	91	2260	7.5	275 8.44 ^c		275 11.96		0.0	230 3.77	401 11.31			0.2		422	233	15	Maximum 230.		
12/3 0910	126	43	8.5	77	1930	7.3	250 7.84 ^c		250 10.88		0.0	230 3.77	302 8.29	318 8.97		1.3		392	203	35	Minimum 6.2		
1964																							
1/7 0910	256	46	10.5	88	1630	7.9	218 6.48 ^c		218 9.48		0.0	238 3.90	274 5.70	237 6.69		1.2		324	129	20			
2/4 0840	189	48	9.8	85	2160	7.5	312 8.96 ^c		312 13.57		4	208 3.41	412 8.58	330 9.31		2.1		448	177	15			
3/3 0830	122	47	10.5	90	3070	8.0	430 12.80 ^c		430 18.70		0.0	222 3.64	536 11.16	545 15.37		2.3		640	458	20			
4/7 0840	142	57	11.0	107	2320	8.2	288 9.84 ^c		288 12.53		0.0	204 3.34	372 7.75	420 11.85		1.7		492	325	20			
5/5 0700	183	57	9.8	95	1360	8.1	164 3.09	34 2.79	164 7.13	4.4 0.11	0.0	174 2.85	154 3.21	235 6.63	2.9 0.05	0.2 0.01	0.5	16	ABS PO ₄ As	294	151	30	
6/9 0730	155	59	7.7	75	1470	7.9	166 6.16 ^c		166 7.22		0.0	192 3.15	156 3.25	269 7.59			0.5		308	151	30		
7/7 0715	118	73	5.9	66	1490	7.8	186 6.34 ^c		186 8.09		0.0	186 3.05	153 3.19	280 7.90			0.4		317	164	30		
8/4 0800	88	72	6.6	75	1460	7.1	184 6.20 ^c		184 8.00		0.0	196 3.21	134 2.79	272 7.67			0.4		310	149	35		
9/1 0740	106	60	9.3	94	1400	8.2	174 3.34 ^c	32 2.66	174 7.57	8.4 0.21	0.0	192 3.15	132 2.75	278 7.84	3.7 0.06		0.4	22	ABS PO ₄ As	300	143	30	

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE D-2 (Cont.)
ANALYSES OF SURFACE WATER
SAN JOAQUIN RIVER AT FRIANT DAM (STA. NO. 24)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance at 25°C (µmhos)	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by				
			ppm	% Sat		equivalents per million																				
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents ^d			
1963 10/7 0445	88	49	7.7	68	45	6.9 7.3	0.25 ^c	3.3 0.17		0.0 0.00	16 0.26		3.8 0.11			0.0				36 ^e	36	12	0	5	Median 0.62 Maximum 62 Minimum 0.23	USGS
1964 1/13 0845	51	45	8.7	71	48	6.8 7.7	0.28 ^c	3.9 0.17		0.0 0.00	18 0.30		1.5 0.04			0.0				39 ^e	38	14	0	4		
5/11 0645	126	48	10.6	105	44	7.0 7.3	0.20	3.8 0.17	1.0 0.03	0.0 0.00	15 0.25	0.0 0.00	4.2 0.12	2.2 0.04	0.1 0.01	0.0	0.0	9.2	ABS 0.00 POL 0.10 As 0.00	38 ^e	39	12	0	3		
7/13 0820	171	52	10.0	91	42	6.7 7.6	0.22 ^c	4.4 0.19		0.0 0.00	16 0.26		3.0 0.08			0.0				34 ^e	46	11	0	4		
9/14 0530	120	51	9.1	82	45	6.9 7.3	0.16	4.3 0.19	0.5 0.01	0.0 0.00	17 0.28	0.0 0.00	3.2 0.09	0.3 0.00		0.1	10	ABS 0.0 POL 0.05 As 0.00	38 ^e	43	12	0	4			

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE D-2 (Cont.)

ANALYSES OF SURFACE WATER

SAN JOAQUIN RIVER NEAR GRAYSON (STA. NO. 26)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (micro-mhos at 25°C)	pH a b	Mineral constituents in equivalents per million											Total dis- solved solids in ppm	Per- cent solids in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by	
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- tro- gen (NO ₃)	Fluo- ride (F)	Boron (B)							Silica (SiO ₂)
1063																							
10/12 1000	930	67	7.3	764	8.0 7.6	3.40 ^c		91 3.96		0.0 0.00	154 2.52		115 3.24			0.0			170	44	13	Median 230. Maximum 7000. Minimum 13.	USGS
11/9 1340	570	61	10.4	1470	8.4 7.9	5.96 ^c		164 7.13		0.0 0.00	224 3.61		231 6.52			0.5			298	113	5		
12/9 1555	735	51	9.1	1460	8.0 8.0	6.08 ^c		182 7.92		0.0 0.00	226 3.70		225 6.35			0.7			304	119	10		
1064																							
1/9 1200	790	48	2.5	1330	8.0 8.1	5.52 ^c		168 7.31		0.0 0.00	244 4.00		186 5.25			0.1			276	75	25		
2/3 1205	515	53	7.6	1620	8.3 8.3	6.60 ^c		230 10.00		1.0 0.13	224 3.67		238 6.71			1.0			330	140	20		
3/9 1400	250	56	15.0	2040	7.7 7.7	9.40 ^c		275 11.96		0.0 0.00	250 4.10		343 9.68			1.1			470	265	30		
4/1 1135	260	62	8.1	1480	8.0 8.0	6.48 ^c		178 7.74		0.0 0.00	208 3.41		240 6.77			0.8			324	153	15		
5/7 0930	460	65	8.3	1020	8.4 8.5	2.40 ^c	30 2.44	123 5.35	4.0 0.10	1.4 0.47	164 2.69	109 2.27	155 4.37	6.1 0.10		0.3		25	242	85	30		
6/4 1000	362	72	8.4	1080	7.5 7.9	4.96 ^c		130 5.66		0.0 0.00	196 3.21		162 7.57			0.4			248	87	35		
7/8 1350	320	79	10.3	1350	8.4 8.0	6.26 ^c		168 7.31		0.0 0.00	222 3.64		215 6.07			0.3			313	131	60		
7/31 1140	220	80	14.9	1400	8.3 8.2	6.76 ^c		152 6.41		0.0 0.00	240 3.93		218 6.15			0.4			338	141	15		
9/3 0845	500	69	8.8	1040	7.8 8.0	2.30 ^c	28 2.34	119 5.18	3.4 0.09	0.0 0.00	193 3.10	106 2.21	154 4.34	3.4 0.05		0.4	22	232	74	15			

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE D-2 (Cont.)

ANALYSES OF SURFACE WATER

SAN JOAQUIN RIVER AT MAZE ROAD BRIDGE (STA. NO. 26a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sedi- ment in ppm	Hardness as CaCO ₃ Total ppm	Tur- bidity in ppm	Coliform MPN/ml	Analyzed by ⁱ					
			ppm	% Sol			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silico (SiO ₂)	Other constituents		
1963 10/12 1130	425	67	6.5	72	556	7.6 7.4		64 2.78		0.0 0.00	112 1.84		89 2.51			0.0			122	30	70	USGS					
11/9 1440	2255	62	8.8	90	481	7.8 7.6		50 2.13		0.0 0.00	78 1.28		80 2.26			0.0			101	37	7						
12/9 1515	2945	52	9.0	82	399	7.4 7.5		44 1.91		0.0 0.00	68 1.11		60 1.69			0.2			84	28	10						
1964 1/9 1115	2335	50	9.2	82	605	7.5 8.1		68 2.96		0.0 0.00	108 1.77		89 2.51			0.2			125	36	15						
2/3 1130	1550	52	7.5	68	964	7.9 7.6		122 5.31		0.0 0.00	140 2.29		151 4.26			0.5			200	85	8						
3/9 1445	510	57	13.0	125	1410	8.0 7.9		166 7.22		0.0 0.00	184 3.02		271 7.64			0.4			308	157	30						
4/1 1100	755	62	8.2	85	1190	7.7 7.9		127 5.52		0.0 0.00	172 2.82		218 6.15			0.5			262	121	15						
5/7 1045	750	66	8.7	93	1000	8.0 8.5		116 5.05	4.8 0.12	8 0.27	156 2.56	81 1.69	181 5.11	7.6 0.12	0.2 0.01	0.3	22	ABS PO ₄ As	246	105	50						
6/4 0835	485	72	7.0	79	1200	8.3 7.4		221 6.18		0.0 0.00	188 3.08		221 6.23			0.3			268	114	25						
7/8 1320	455	74	8.7	102	1250	7.9 7.5		144 6.26		0.0 0.00	190 3.11		242 6.83			0.4			282	126	50						
7/31 1100	300	74	8.7	100	1120	7.9 7.6		158 6.87		0.0 0.00	200 3.28		289 8.15			0.4			312	148	40						
9/3 0815	475	70	7.3	82	1040	7.3 7.8		120 5.22	4.5 0.12	0.0 0.00	187 3.06	81 1.69	180 5.08	4.6 0.07		0.4	22	ABS PO ₄ As	232	79	15						

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Arsenic (As), alkyl benzene sulfonates (ABS), and phosphate (PO₄)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE D-2 (Cont.)

ANALYSES OF SURFACE WATER

SAN JOAQUIN RIVER NEAR MENDOTA (STA. NO. 25)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance at 25°C µmhos/cm	pH a b	Mineral constituents in parts per million										Total dissolved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃		Tur- bidity in ppm	Coliform MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlor- ide (Cl)	Nit- rate (NO ₃)	Fluor- ide (F)			Boron (B)	Silico- nate (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄).

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

ANALYSES OF SURFACE WATER

SAN JOAQUIN RIVER AT PATTERSON BRIDGE (STA. NO. 27a)

Date and time sampled P.S.T.	Discharges in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃		Tur- bidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	equivalents per million					Silica (SiO ₂)	Other constituents ^d			
														Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							
1963																							
10/8 1100		70	7.1	80	578	7.3 7.9	c 2.67	6.1 2.55		0.0 0.00	136 2.23		81 2.29		0.1			50	134	22	50	Median 62. Maximum 2400. Minimum 6.2	USGS
11/5 1100		59	9.2	93	1390	7.5 7.9	c 5.60	168 7.31		0.0 0.00	204 3.34		228 6.43		0.5			57	280	113	7		
12/3 1105		44	8.6	71	1260	7.4 8.3	c 5.20	164 7.13		0.6 0.20	196 3.21		187 5.28		0.8			58	260	89	10		
1964																							
1/7 1115		49	10.0	88	1350	7.8 8.5	c 5.60	170 7.40		4 0.13	222 3.64		189 5.33		0.8			57	280	91	15		
2/4 1100		53	9.9	91	1620	7.8 8.0	c 6.46	232 10.08		0.0 0.00	212 3.47		240 6.77		1.2			61	324	150	15		
3/3 1040		50	11.8	104	1990	8.2 8.1	c 8.04	276 12.01		0.0 0.00	214 3.51		325 9.17		1.1			60	402	227	9		
4/7 1040		61	10.4	106	1450	8.0 7.8	c 6.04	186 8.09		0.0 0.00	184 3.02		242 6.83		0.7			57	302	151	15		
5/5 0930		59	10.5	104	1140	8.2 7.9	51 2.54	144 6.26	3.4 0.09	0.0 0.00	180 2.95		175 4.94	4.3 0.07	0.1 0.01		20 As	57	236	88	30		
6/9 0910		64	8.6	90	1100	7.8 8.1	c 4.64	136 5.92		0.0 0.00	172 2.82		174 4.91		0.3			56	232	91	20		
7/7 0925		72	10.8	120	1320	8.3 8.0	c 5.50	169 7.35		0.0 0.00	190 3.11		238 6.75		0.4			57	275	119	15		
8/4 0945		72	9.8	112	1240	8.2 8.1	5.12	149 6.48		0.0 0.00	194 3.18		204 5.75		0.3			56	256	97	25		
9/1 0945		65	9.0	95	1110	8.0 8.0	2.59	136 5.92	3.7 0.09	0.0 0.00	198 3.25		185 5.22	5.0 0.08	0.1 0.01		24 As	55	236	74	15		

Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USDI); United States Environmental County Health Control District (SECHD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Public Health (LADPH); City of Long Beach, Department of Control District (SCCWD).

TTT has California Department of Water Resources (DW8), as indicated.

TABLE D-2 (Cont.)

ANALYSES OF SURFACE WATER

SAN JOAQUIN RIVER NEAR VERNALIS (STA. NO. 27)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	% Sat	Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in equivalents per million								Total dis- solved solids in ppm	Per- cent solid- um	Hardness as CaCO ₃ ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by				
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)							Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)	Silica (SiO ₂)
1963																								
10/9 1015	2300	70	7.0	78	573	7.5 8.1	2.75 ^c		58 2.52		0.0 0.00	136 2.23		87 2.45		0.1		323 ^e	48	136	24	25	Median 620. Maximum 7000. Minimum 50.	USGS
11/6 0930	2712	59	8.6	85	445	7.2 7.6	1.94 ^c		47 2.04		0.0 0.00	79 1.29		70 1.97		0.1		251 ^e	51	97	32	7		
12/4 0920	4630	45	8.8	73	258	7.1 7.5	1.68 ^c		38 1.65		0.0 0.00	73 1.20		50 1.41		0.2		146 ^e	50	84	24	10		
1964																								
1/8 1055	3184	47	10.1	87	435	7.3 8.2	1.86 ^c		44 1.91		0.0 0.00	81 1.33		58 1.64		0.2		245 ^e	51	93	27	15		
2/5 1030	2370	51	10.3	92	643	7.4 8.1	2.82 ^c		74 3.22		0.0 0.00	107 1.75		95 2.68		0.3		363 ^e	53	144	53	6		
3/4 1015	1050	53	10.3	95	1170	7.6 8.3	5.28 ^c		136 5.92		2 0.07	166 2.72		209 5.90		0.3		660 ^e	53	264	125	10		
4/8 1015	676	64	9.9	104	1190	7.9 7.7	5.32 ^c		139 6.05		0.0 0.00	176 2.88		223 6.29		0.4		671 ^e	53	266	122	20		
5/6 0830	847	58	9.6	95	1010	7.4 7.5	2.50 ^c	25 2.08	119 5.18	4.4 0.11	0.0 0.00	176 2.88	82 1.71	171 4.82	5.0 0.08	0.1 0.01	0.4 0.4	579 ^e	54	229	85	50		
6/10 0940	946	64	8.6	90	896	7.8 7.8	4.16 ^c		99 4.31		0.0 0.00	166 2.72		146 4.12		0.3		505 ^e	51	208	72	25		
7/8 0715	400	73	8.8	101	1250	8.1 7.4	5.86 ^c		149 6.48		0.0 0.00	187 3.06		248 7.00		0.4		705 ^e	53	290	137	30		
8/5 0820	337	72	8.5	75	1390	8.0 7.9	6.12 ^c		150 6.52		0.0 0.00	198 3.25		259 7.31		0.3		784 ^e	52	306	144	45		
9/2 0830	826	68	8.3	91	1030	7.8 7.9	2.74 ^c	24 1.94	119 5.18	5.8 0.15	0.0 0.00	190 3.11	78 1.62	182 5.13	5.8 0.09	0.3		601 ^e	52	234	78	40		

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄).

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (CDWR), as indicated.

TABLE D-2 (Cont.)

ANALYSES OF SURFACE WATER

STATISLAUS RIVER AT KOETITZ RANCH (STA. NO. 29)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent acid- tum	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by ^h																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
			ppm	% Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silico (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of

TABLE D-2 (Cont.)

ANALYSES OF SURFACE WATER

STANISLAUS RIVER BELOW TULLOCH DAM (STA. NO. 29a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sed- iment	Hardness as CaCO ₃ ppm	Tur- bidity in ppm	Coliform ^h MPN/ml	Analyzed by i				
			ppm	% Sat			equivalents																			
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Baron (B)	Silica (SiO ₂)	Other constituents d	
1963 10/7 1115	930	68	6.2	67	57	6.8 7.2	^c 0.46	1.9 0.08		0.0 0.00	29 0.48		1.0 0.03			0.0				42 ^e	15	23	0	4	Median 0.23 Maximum 6.2 Minimum 0.23	USGS
1964 1/13 1240	1600	46	11.2	92	65	7.2 7.7	^c 0.54	2.6 0.11		0.0 0.00	34 0.56		3.5 0.10			0.0				48 ^e	17	27	0	3		
5/11 1245		63			57	6.9 7.7	5.6 0.28	2.2 0.18	0.4 0.01	0.0 0.00	27 0.44	2.0 0.04	1.0 0.03	5.4 0.09	0.0 0.00	0.0	13	ABS PO ₄ As		46 ^g	19	23	1	4		
7/13 1215		63	8.2	86	50	6.6 7.7	^c 0.38	2.6 0.11		0.0 0.00	24 0.39		1.0 0.03			0.0				37 ^e	22	19	0	3		
9/14 1100	1060	68	6.8	74	61	6.6 7.3	6.4 0.32	1.9 0.16	0.6 0.02	0.0 0.00	32 0.52	1.0 0.02	0.8 0.02	5.4 0.09		0.3	11	ABS PO ₄ As		44 ^g	21	24	0	4		

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); Bureau of Reclamation (USBR); United States Public Health Service (USPHS); Son Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE D-2 (cont.)

ANALYSES OF SURFACE WATER

TULE RIVER NEAR SPRINGVILLE (STA. NO. 91b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen	Specific conductance (micromhos at 25°C)	pH a b	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium in ppm	Hardness as CaCO ₃ Total ppm	Turbidity in nptm	Coliform MPN/ml	Analyzed by			
						equivalents																		
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents ^d
1963																								
11/4 1930	27	58	8.8	86	424	8.2	3.52 ^c		22 0.96		0.0 0.00	254 4.16		14 0.39		0.1		280 ^e	21	176	0	2		
12/2 0950	63	45	10.6	88	312	8.5	2.62 ^c		16 0.70		6 0.20	174 2.85		10 0.28		0.1		206 ^e	21	131	0	1		
1964																								
1/6 1945	41	47	-	-	371	8.2	3.16 ^c		19 0.83		8 0.27	210 3.14		12 0.34		0.1		245 ^e	21	158	0	1		
2/14 1050	46	42	11.1	89	348	7.5	2.90 ^c		18 0.78		0.0 0.00	206 3.38		10 0.28		0.0		230 ^e	21	145	0	1		
3/5 1010	56	44	-	-	342	8.5	2.90 ^c		18 0.78		8 0.27	190 3.11		10 0.28		0.1		226 ^e	21	145	0	1		
4/8 1445	139	58	10.0	98	202	7.8	1.58 ^c		11 0.48		0.0 0.00	117 1.92		2.5 0.07		0.1		133 ^e	23	79	0	1		
5/4 -	117	52	11.2	102	183	8.1	26 1.30	2.1 0.22	8.8 0.38	1.6 0.04	3 0.07	103 1.69	4.0 0.08	2.0 0.06	4.1 0.07	0.1 0.01	0.2	124 ^g	20	76	0	1		
6/1 1945	131	68	5.4	61	164	7.6	1.34 ^c		8.8 0.38		0.0 0.00	94 1.54		3.5 0.10		0.0		108	22	67	0	1		
7/6 1940	23	72	4.9	57	323	7.7	2.70 ^c		17 0.74		0.0 0.00	186 3.05		8.5 0.24		0.1		213 ^e	22	135	0	2		
8/5 1230	7	80	6.0	74	372	8.3	3.00 ^c		22 0.96		1 0.03	219 3.59		12 0.34		0.2		246 ^e	24	150	0	2		
9/9 0930	3	61	13.5	136	429	8.3	48 2.40	12 0.98	28 1.22	4.5 0.12	2 0.07	240 4.06	6.0 0.12	14 0.39	1.1 0.02	0.2	32	271 ^g	26	169	0	1		

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphata (PO₄.)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); Son Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE D-2 (Cont.)

ANALYSES OF SURFACE WATER

TULE RIVER BELOW SUCCESS DAM (STA. NO. 91)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million								Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bidity in ppm	Coliform MPN/ml	Analyzed by	
			ppm	%Sat			equivalents															
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)			Ni- trate (NO ₃)	Fluo- ride (F)				Boron (B)
																			As	PO ₄	As	PO ₄

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE D-2 (Cont.)
ANALYSES OF SURFACE WATER

TUOLUMNE RIVER BELOW DON PEDRO DAM (STA. NO. 31a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by i			
			ppm	% Sat			equivalents																			
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silice (SiO ₂)				Other constituents		
<u>1963</u> 10/11 1310	1710	62	7.0	72	22	6.6 6.7	<u>1.15</u> ^c		1.1 0.05		0.0 0.00	10 0.15		1.0 0.03			0.0			17 ^e	25	8	0	2	No Samples Taken	USGS
<u>1964</u> 1/9 12510	730	54	8.4	73	28	6.7 7.7	<u>0.20</u> ^c		0.08 0.03		0.0 0.00	12 0.20		1.0 0.03			0.0			21 ^e	13	10	0	4		
5/7 1305	1110	54	5.3	87	40	6.8 7.5	1.2 0.26	1.0 0.06	5.0 0.09	1.2 0.01	0.0 0.00	30 0.30	1.0 0.04	1.5 0.01	1.5 0.09	0.1 0.00	0.2	7.8	ABS PO ₄ As	34 ^e	21	16	1	1		
7/8 0830	2410	60	7.2	72	29	6.8 7.1	<u>0.20</u> ^c		1.9 0.08		0.0 0.00	12 0.20		0.5 0.01			0.1			22 ^e	29	10	0	2		
9/3 1330	1510	62	7.1	74	21	6.8 7.0	2.4 0.12	0.5 0.04	1.3 0.06	0.0 0.00	0.0 0.00	10 0.16	1.0 0.02	0.6 0.02	0.0 0.00		0.0	4.8	ABS PO ₄ As	19 ^e	27	8	0	2		

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE D-2 (Cont.)
ANALYSES OF SURFACE WATER
TUOLUMNE RIVER AT HICOMAN BRIDGE (STA. NO. 30)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhm/cm at 25°C)	pH a b	Mineral constituents in parts per million								Total dis- solved solids in ppm	Per- cent sedi- ment in ppm	Hardness as CaCO ₃ Total ppm N.C. ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by				
			ppm	% Sat			equivalents																	
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)							Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)	Silica (SiO ₂)
1963																								
10/11 1350	488	67	7.9	85	119	7.1 7.2	c 0.66	10 0.14	0.0 0.00	29 0.48		18 0.51			0.0			69 ^e	42	30	6	4	No Samples Taken	USGS
11/9 0840	1636	59	8.0	79	44	6.8 7.1	c 0.28	2.6 0.11	0.0 0.00	17 0.28		5.1 0.14			0.0			26 ^e	28	14	0	3		
12/10 1000	2170	51	9.4	88	53	6.9 7.1	c 0.37	2.8 0.12	0.0 0.00	22 0.36		3.5 0.10			0.0			31 ^e	24	18	0	5		
1964																								
1/9 1400	666	51	10.4	94	80	7.3 7.6	c 0.44	6.5 0.28	0.0 0.00	24 0.39		11 0.31			0.0			47 ^e	39	22	2	2		
2/3 1445	569	51	9.1	82	141	7.7 7.7	c 0.82	11 0.48	0.0 0.00	41 0.67		20 0.56			0.0			82 ^e	37	41	7	3		
3/9 1150	121	59	11.3	112	450	8.0 7.9	c 2.10	44 1.91	0.0 0.00	94 1.54		90 2.54			0.0			26 ^e	48	105	28	2		
4/1 1400	73.7	64	8.5	89	446	8.2 8.4	c 2.10	47 2.04	2 0.07	93 1.52		86 2.43			0.1			26 ^e		105	25	4		
5/7 1425	70	71	7.8	88	465	8.6 8.3	28 1.40	47 2.04	4.0 0.10	95 1.56	4.0 0.08	92 2.60	6.0 0.10	0.1 0.01	0.1	4.1	ABS 0.0 PO ₄ 0.20 As 0.00	303 ^g	17	108	27	7		
6/4 1250	25	76	10.2	122	552	8.4 8.5	c 2.48	58 2.52	4 0.13	102 1.67		110 3.10			0.1			322 ^e	50	124	34	3		
7/8 0955	82	76	9.1	108	558	8.4 8.3	c 2.48	58 2.52	2 0.07	109 1.79		112 3.16			0.1			322 ^e	50	124	31	5		
7/31 1400	44.8	79	9.0	110	578	8.1 8.1	c 2.46	58 2.52	0.0 0.00	114 1.87		111 3.13			0.1			340 ^e	51	123	30	15		
9/3 1230	100	73	11.0	125	546	8.1 8.1	33 1.65	58 2.52	4.2 0.13	113 1.85	5.0 0.10	104 2.93	0.8 0.01		0.4	5.1	ABS 0.0 PO ₄ 0.10 As 0.01	350 ^g	50	119	26	4		

o Field pH.
b Laboratory pH.
c Sum of calcium and magnesium in ppm.
d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)
e Derived from conductivity vs TDS curves.
f Determined by addition of analyzed constituents.
g Gravimetric determination.
h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.
i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE D-2 (Cont.)

ANALYSES OF SURFACE WATER

TUOLUMNE RIVER AT TUOLUMNE CITY (STA. NO. 31)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dissolved solids in ppm	Per-cent solid-ium	Hardness as CaCO ₃ Total ppm	Tur-bid-ity in ppm	Caliform ^h MPN/ml	Analyzed by i					
						Calcium (Ca)	Magne-sium (Mg)	Sodium (Na)	Potas-sium (K)	Carbon-ate (CO ₃)	Bicar-bonate (HCO ₃)	Sul-fate (SO ₄)	Chlo-ride (Cl)	Ni-trate (NO ₃)	Fluo-ride (F)							Boron (B)	Silico (SiO ₂)	Other constituents		
<u>1963</u> 10/12 0930	900	66	5.2	353	7.0 7.2	1.54 ^c		36 1.57		0.0 0.00	70 0.15		69 1.95			0.0				202 ^e	50	77	20	10	Median 2400 Maximum 24000 Minimum 6.	USGS
11/9 1045	1550	60	7.7	163	6.9 7.3	0.74 ^c		14 0.61		0.0 0.00	31 0.51		31 0.87			0.0				932 ^e	45	37	12	2		
12/9	2150	52	9.5	127	7.0 7.5	0.70 ^c		11 0.48		0.0 0.00	29 0.48		21 0.59			0.1				726 ^e	41	35	11	10		
<u>1964</u> 1/9 1200	1450	51	9.0	212	7.2 8.0	0.94 ^c		20 0.87		0.0 0.00	43 0.70		38 1.07			0.0				121 ^e	48	47	12	5		
2/3 1230	760	51	7.6	360	7.1 8.1	1.70 ^c		38 1.65		0.0 0.00	72 1.18		70 1.97			0.0				206 ^e	49	85	26	4		
3/9 1325	335	57	7.9	862	7.5 7.6	3.78 ^c		93 4.05		0.0 0.00	144 2.36		185 5.22			0.0				493 ^e	52	189	71	10		
4/1 1145	300	63	6.4	912	7.4 7.7	3.84 ^c		102 4.44		0.0 0.00	148 2.43		192 5.42			0.1				522 ^e	54	192	71	5		
5/7 0850	300	64	5.1	835	7.3 7.4	4.7 2.35	15 1.25	87 3.78	6.0 0.15	0.0 0.00	140 2.29	11 0.23	172 4.85	5.3 0.09	0.3 0.02	0.2	38	ABS PO ₄ As 0.1 1.2 0.01	523 ^g	50	180	65	1			
6/4 1015	191	72	6.4	1020	7.6 7.8	4.04 ^c		108 4.70		0.0 0.00	146 2.56		205 5.78			0.2				583 ^e	54	202	74	7		
7/8 1405	200	80	8.3	1020	8.0 8.3	4.10 ^c		116 5.05		2 0.07	166 2.72		222 6.26			0.2				583 ^e	53	220	81	6		
7/31 1200	195	69	7.5	1040	7.3 7.6	4.78 ^c		113 4.92		0.0 0.00	180 2.95		223 6.29			0.2				595 ^e	52	224	76	2		
9/3 0910	235	69	4.5	982	7.2 7.7	55 2.74	17 1.42	102 4.44	7.6 0.19	0.0 0.00	182 2.98	11 0.23	202 5.70	1.3 0.02		0.2	40	ABS PO ₄ As 0.2 1.3 0.00	584 ^g	51	208	59	2			

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Arsenic (As), alkyl benzene sulfonate (ABS), and phosphate (PO₄)

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE D-3
SPECTROGRAPHIC ANALYSES OF SURFACE WATER

Station	Sto No	Date 1964	Constituents in parts per billion																		
			Alumi- num (Al)	Beryl- ium (Be)	Bismuth (Bi)	Cadmium (Cd)	Cobalt (Co)	Chro- mium (Cr)	Copper (Cu)	Iron (Fe)	Gallium (Ga)	Germa- nium (Ge)	Mango- nese (Mn)	Molyb- denum (Mo)	Nickel (Ni)	Lead (Pb)	Titanium (Ti)	Vanadium (V)	Zinc (Zn)		
San Joaquin River at Fremont Ford Bridge	25c	5- 5	≤ 1.4	< 0.57	< 0.29	< 1.4	≤ 1.4	< 1.4	< 1.4	< 1.4	< 1.4	22	< 5.7	< 0.29	22	7.4	1.8	< 1.4	< 0.57	4.0	< 5.7
		9- 1	3.1	< 0.57	< 0.29	< 1.4	≤ 1.4	≤ 1.4	4.0	16	< 5.7	< 0.29	< 1.4	8.6	1.7	< 1.4	< 0.57	6.3	7.1		
San Joaquin River near Vernalis	27	5- 6	1.8	< 0.57	< 0.29	< 1.4	≤ 1.4	< 1.4	< 1.4	< 1.4	2.9	10	< 5.7	< 0.29	1.7	4.0	1.6	< 1.4	< 0.57	4.6	≤ 5.7
		9- 2	2.1	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	3.4	11	< 5.7	< 0.29	< 1.4	3.1	1.3	< 1.4	< 0.57	5.7	5.7		
Stanislaus River at Koetitz Ranch	29	5- 5	1.9	< 0.57	< 0.29	< 1.4	≤ 1.4	< 1.4	< 1.4	< 1.4	< 1.4	16	< 5.7	< 0.29	1.7	1.1	≤ 0.29	< 1.4	< 0.57	5.1	< 5.7
		9- 1	3.1	< 0.57	< 0.29	< 1.4	≤ 1.4	< 1.4	3.7	7.7	< 5.7	< 0.29	< 1.4	1.4	0.66	< 1.4	< 0.57	4.0	< 5.7		
Tuolumne River at Tuolumne City	31	5- 7	≤ 1.2	< 0.50	< 0.25	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	3.9	< 5.0	< 0.25	< 1.2	≤ 0.25	1.1	< 1.2	< 0.50	2.1	< 5.0
		9- 3	4.0	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	3.7	< 5.7	< 0.29	4.6	1.8	1.3	< 1.4	< 0.57	5.4	< 5.7
Merced River near Stevinson	32	5- 5	≤ 1.4	< 0.57	< 0.29	< 1.4	≤ 1.4	< 1.4	< 1.4	< 1.4	< 1.4	24	< 5.7	< 0.29	< 1.4	1.4	≤ 0.29	< 1.4	< 0.57	3.4	< 5.7
		9- 1	7.1	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	6.9	23	< 5.7	< 0.29	< 1.4	1.4	0.57	< 1.4	< 0.57	4.3	< 5.7		
Kings River below People's Weir	34	5-11	≤ 1.2	< 0.50	< 0.25	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	16	< 5.0	< 0.25	< 1.2	2.0	0.38	< 1.2	< 0.50	0.98	< 5.0
		9-14	3.7	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	≤ 1.4	≤ 1.4	≤ 1.4	17	< 5.7	< 0.29	< 1.4	2.3	0.34	< 1.4	< 0.57	0.74	< 5.7
Kern River near Bakersfield	36	5- 4	2.5	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	≤ 1.4	11	< 5.7	< 0.59	< 1.4	6.0	0.40	< 1.4	< 0.57	0.43	≤ 5.7
		9- 3	2.3	< 0.57	< 0.29	< 1.4	≤ 1.4	< 1.4	≤ 1.4	< 1.4	≤ 1.4	3.1	< 5.7	< 0.29	< 1.4	6.3	0.49	< 1.4	< 0.57	1.3	< 5.7
Tule River below Success Dam	91	5- 4	4.0	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	4.0	< 5.7	< 0.29	< 1.4	1.4	≤ 0.29	< 1.4	< 0.57	2.6	< 5.7
		9- 9	9.4	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	3.7	< 5.7	< 0.29	< 1.4	1.6	0.91	< 1.4	< 0.57	7.4	< 5.7
Delta-Mendota Canal near Mendota	92	5-11	2.3	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	2.3	5.4	< 5.7	< 0.29	< 1.4	1.9	1.0	< 1.4	< 0.57	4.9	< 5.7
		9-14	46	< 0.57	< 0.29	< 1.4	≤ 1.4	< 1.4	≤ 1.4	< 1.4	≤ 1.4	43	< 5.7	< 0.29	< 1.4	1.4	1.3	< 1.4	< 0.57	7.1	< 5.7
Delta-Mendota Canal near Tracy	93	5- 6	≤ 1.4	< 0.57	< 0.29	< 1.4	≤ 1.4	< 1.4	< 1.4	< 1.4	≤ 1.4	22	< 5.7	< 0.29	< 1.4	1.0	0.89	< 1.4	57	< 0.29	< 5.7
		9- 1	8.3	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	4.9	6.3	< 5.7	< 0.29	< 1.4	2.4	1.2	< 1.4	< 0.57	7.1	< 5.7		

< = less than the amount indicated

= = equal to, but slightly less than the amount indicated

TABLE D-4
RADIOASSAYS OF SURFACE WATER

Station	Sta. No.	Date	Picouries per liter					
			Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta		
Big Creek above Pine Flat Dam	33a	5/11 9/14	0.17 + - 0.21 ±	0.01 + - 0.39 ±	- 5.46 + - 3.91 ±	10.54 + 10.85	1.48 + - 2.57 ±	9.13 + 8.49
Chowchilla River near Raymond	114	5/11	- 0.02 + 0.90	- 0.13 + 0.67	19.42 + 12.11	-	- 4.26 + 8.73	
Delta-Mendota Canal near Mendota	92	5/11 9/14	1.47 + 0.67 ±	1.28 + 0.59 ±	12.31 + - 12.77 ±	13.08 + 11.09	2.40 + - 5.20 ±	9.86 + 7.91
Delta-Mendota Canal near Tracy	93	5/6 9/1	- 0.80 + 3.10 ±	- 0.51 + 2.18 ±	156.80 + 6.19 ±	10.21 + 13.61	7.66 + 1.90 ±	9.79 + 9.66
Fresno River near Daulton	113	5/11	- 0.08 + 0.61	0.27 + 0.84	3.56 + 9.67	-	2.51 + 9.02	
Kaweah River below Terminus Dam	35	5/11 9/14	0.13 + - 0.29 ±	- 0.34 + 0.17 ±	8.26 + - 16.63 ±	9.95 + 10.69	- 4.62 + 5.00 ±	8.55 + 8.58
Kaweah River near Three Rivers	35b	5/11 9/14	- 0.18 + 0.73 ±	0.70 + - 0.37 ±	0.79 + - 7.35 ±	11.46 + 10.49	4.84 + 6.71 ±	9.92 + 8.60
Kern River near Bakersfield	36	5/4 9/3	1.68 + - 0.12 ±	0.31 + 1.21 ±	- 15.29 + - 3.35 ±	11.35 + 10.84	0.25 + - 6.44 ±	7.67 + 7.81
Kern River below Isabella Dam	36a	5/1 9/11	1.49 + - 1.50 ±	0.84 + 0.08 ±	7.99 + 8.81 ±	10.15 + 12.41	- 5.93 + 7.83 ±	9.74 + 8.88
Kern River at Kernville	36b	5/1 9/11	0.07 + 1.32 ±	0.07 + 0.11 ±	4.07 + - 5.36 ±	10.86 + 10.61	- 11.38 + 1.43 ±	9.98 + 8.24
Kings River below North Fork	33c	5/11 9/14	0.69 + - 0.82 ±	- 0.59 + 0.12 ±	4.61 + 9.14 ±	10.23 + 10.55	- 2.87 + - 7.53 ±	8.31 + 8.44
Kings River below Peoples Weir	34	5/11 9/14	0.85 + - 0.49 ±	0.71 + 0.00 ±	- 7.81 + 4.20 ±	11.56 + 9.46	13.25 + 2.12 ±	10.25 + 7.86

TABLE D-4 (Cont.)
RADIOASSAYS OF SURFACE WATER

Station	Sta. No	Date	Picocuries per liter			
			Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
Kings River below Pine Flat Dam	33b	5/11 9/14	- 0.53 + 0.74 1.94 ± 1.51	0.49 + 0.74 - 0.35 ± 0.45	10.43 + 10.94 - 11.66 ± 10.57	0.48 + 7.64 - 8.28 ± 7.61
Merced River below Exchequer Dam	32a	5/11 9/14	- 0.38 + 0.23 0.23 ± 1.18	- 0.21 + 0.67 - 0.74 ± 0.27	10.73 + 9.84 - 0.01 ± 11.06	3.69 + 8.98 - 0.50 ± 8.03
Merced River near Stevinson	32	5/5 9/1	1.49 + 1.64 0.78 ± 1.28	- 0.53 + 0.73 - 0.20 ± 0.73	12.06 + 11.26 - 1.23 ± 11.10	4.01 + 9.53 - 2.14 ± 7.84
Salt Slough at San Luis Ranch	24c	5/5 9/1	7.77 + 6.25 8.67 ± 5.34	0.32 + 0.86 0.46 ± 0.89	- 4.71 + 13.62 - 22.81 ± 13.34	10.74 + 9.36 - 2.99 ± 9.22
San Joaquin River at Crows Landing Bridge	26b	5/5	3.05 ± 3.93	0.80 ± 1.17	4.55 ± 12.35	11.03 ± 9.55
San Joaquin River at Fremont Ford Bridge	25c	5/5	8.15 ± 6.97	1.98 ± 1.49	12.38 ± 14.94	5.52 ± 9.01
San Joaquin River at Friant Dam	24	5/11 9/14	0. + 0.96 - 0.19 ± 0.70	0.31 + 0.65 - 0.18 ± 0.60	5.26 + 10.97 - 1.77 ± 10.45	- 0.34 + 7.61 - 1.62 ± 8.58
San Joaquin River near Grayson	26	5/7 9/3	9.12 + 7.40 4.31 ± 4.07	1.25 + 1.56 0.24 ± 0.81	1.63 + 17.96 - 1.82 ± 13.50	1.18 + 10.60 - 5.26 ± 9.06
San Joaquin River at Maze Road Bridge	26a	5/7 9/3	1.09 + 1.76 0.38 ± 1.97	0.26 + 0.93 0.47 ± 0.98	9.37 + 12.94 5.14 ± 10.92	8.31 + 10.05 - 4.76 ± 7.88
San Joaquin River near Mendota	25	5/11 9/2	0.47 + 2.18 5.15 ± 5.00	- 0.13 + 0.80 1.24 ± 1.13	3.19 + 12.32 9.50 ± 12.42	12.70 + 10.34 - 12.77 ± 11.09
San Joaquin River at Patterson Bridge	27a	5/5 9/1	0.15 + 1.65 - 0.83 ± 3.54	0.07 + 0.70 1.10 ± 1.33	- 18.62 + 10.44 15.61 ± 14.15	- 1.44 + 7.44 7.54 ± 10.50

TABLE D-4 (Cont.)
RADIOASSAYS OF SURFACE WATER

Station	Sta No	Date	Picocuries per liter							
			Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta				
San Joaquin River near Vernalis	27	5/6 9/2	4.71 + 5.15 ±	4.04 5.00	0.44 + 1.24 ±	0.89 1.13	19.42 + 9.50 ±	12.98 12.42	27.68 + 6.98 ±	11.49 9.62
Stanislaus River at Koetitz Ranch	29	5/5 9/1	- 0.21 + - 0.08 ±	0.69 0.87	0.82 + 0.60 ±	1.00 0.98	13.36 + 1.51 ±	10.48 11.08	8.96 + 5.02 ±	10.25 9.32
Stanislaus River below Tulloch Dam	29a	5/11 9/14	- 0.49 + 14.19 ±	0.52 9.29	0.01 + 0.28 ±	0.66 0.90	-11.71 + -	10.33 -	7.94 + 5.27 ±	9.28 7.51
Tule River near Springville	91b	5/4 9/9	0.74 + 5.88 ±	1.18 3.79	0.05 + 0.67 ±	0.85 1.21	4.76 + 2.78 ±	9.88 12.53	5.28 + 4.36 ±	8.80 9.16
Tule River below Success Dam	91	5/4 9/9	0.91 + 0.11 ±	1.50 1.17	- 0.48 + 0.00 ±	0.28 0.58	14.18 + 5.26 ±	12.21 11.11	0.46 + 8.89 ±	8.21 8.76
Tuolumne River below Don Pedro Dam	31a	5/7 9/3	- 0.41 + 0.29 ±	0.21 1.08	0.32 + 0.01 ±	0.82 0.71	2.94 + 3.36 ±	9.84 10.60	5.38 + -10.10 ±	9.81 8.30
Tuolumne River at Hickman Bridge	30	5/7 9/3	- 0.51 + 2.86 ±	1.95 3.11	0.39 + 0.04 ±	1.11 0.71	12.56 + 11.46 ±	12.19 12.83	4.60 + - 1.28 ±	9.21 8.69
Tuolumne River at Tuolumne City	31	5/7 9/3	0.44 + 6.73 ±	2.13 5.37	0.78 + - 0.58 ±	0.99 0.24	11.07 + - 2.21 ±	14.84 11.88	11.97 + 0.13 ±	9.26 8.60

APPENDIX E
GROUND WATER QUALITY

The contribution of mineral constituents from major tributaries was also appreciably higher than it was the previous year. The increase in mineral concentration was most noticeable during the irrigation season when the streamflow regimen was at its lowest stage for the entire year. The incremental change in mineral constituents over the previous year's concentrations increased significantly from Fremont Ford to Vernalis. This accumulation of minerals is attributed to the lack of available streamflow sufficient in quantity to dilute accretions affluent to the lower reaches of the San Joaquin River.

The U. S. Bureau of Reclamation supplemented the flow in the San Joaquin River to aid the migration of fish from the Sacramento-San Joaquin Delta to the lower reaches of the San Joaquin River. Approximately 45,000 acre-feet were diverted from the Delta-Mendota Canal through the Newman and Westley Wasteways from September 23 to November 1, 1964, to provide adequate streamflow and dissolved oxygen content necessary for fish migration up the San Joaquin River.

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E-4	Nitrate Concentrations in the San Joaquin Valley

INTRODUCTION

This appendix contains data pertaining to ground water quality in the San Joaquin Valley area. The data consist of the chemical characteristics of those waters sampled. The analyses represent the constituents which were most significant for the evaluation and/or surveillance of ground water quality. These data appear on the tables and plates. Additional supporting information is available in the office of the San Joaquin District, Fresno, California.

Explanation of Tables

Table E-1 lists mineral analyses of selected wells for the area reported in this volume excluding analyses for the Fresno-Madera area which are listed on Table E-2. Table E-2 lists the analyses used in the preparation of Plate E-3 for the Fresno-Madera area, and those analyses are listed by the aquifer from which the samples came.

A standard mineral analysis is made on the samples of wells either new to the program or whose previous analyses have varied from year to year requiring a more complete history before partial analysis would be suitable. A partial mineral analysis is suitable when a satisfactory history on the well has been established and a detailed analysis is not required to maintain surveillance.

Trace element analyses and other important constituents not determined in a standard mineral analysis are shown in Table E-3. These constituents, though small in quantity, can be significant for various types of water usages. Three constituents not normally determined, ABS (detergents), nutrients, and lithium, were analyzed in selected samples, and are shown on Table E-4.

Where mineral analyses of water from a well were found to differ significantly from those of other wells in the surrounding area, the deviations were recorded and are given in Table E-6. Such deviations may be either in a single constituent or the complete analysis. Special effort is made to investigate these wells to determine the reason for the observed deviations.

Explanation of Plates

The locations of the selected sampling wells are shown on Plate E-1 except those for the Fresno-Madera area which are shown on Plate E-2. Plate E-3 illustrates, by aquifer, the chemical character of the water in the Fresno-Madera area. The chemical character of the water is illustrated by mineral type and by contours of electrical conductivity. The mineral type was determined by the use of the hypothetical salt method.

The nitrate concentrations of ground water in the San Joaquin Valley are illustrated on Plate E-4 and are represented by contours of equal parts per million of nitrates.

Explanation of Headings and Symbols Used in Table E-1

State Well Number--The well numbering system used in this report for the location of wells is explained on page 160.

Agency Supplying Data--The numbers in this column are the code numbers for the agencies who sampled the well.

The agencies, and code numbers assigned to them, are listed in the following tabulation:

<u>Agency Code</u>	<u>Agency</u>
5000	U. S. Geological Survey
5001	U. S. Bureau of Reclamation
5050	Department of Water Resources
5060	Department of Public Health
5124	Kern County Farm Advisor
5125	Fresno County Farm Advisor
5128	Madera County Farm Advisor
5200	City of Fresno
5521	Modesto Irrigation District
5631	Fresno Irrigation District
5641	Central California Irrigation District
5645	Arvin-Edison Water Storage District
5702	Individual Owner
5703	Valley Waste Disposal Company

TABLE E-1
MINERAL ANALYSES OF GROUND WATER
SAN JOAQUIN DISTRICT

State Well Number			Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value						Mineral constituents in parts per million						
						Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Baron B	Sili- ca SiO ₂	ID ₅ Computed Evap 180° C
1N/10E-17G 1 M 3-26-64 5050			56	7.6	279	--	--	16 0.70	--	--	114 1.87	--	15 0.42	--	0.10	--	--	97
2S/ 8F-27N 1 M 8-11-64 5521			--	7.8	--	25 1.25	10 0.82	32 1.39	--	0	162 2.66	11 0.23	21 0.59	--	0.05	32	249	104
2S/ 9F-28N 1 M 8-11-64 5521			--	7.2	--	25 1.25	13 1.07	23 1.00	--	0	152 2.49	19 0.40	14 0.39	--	0.05	44	246	116
2S/ 9F-31G 1 M 8-11-64 5521			--	7.6	--	15 0.75	4 0.33	17 0.74	--	0	95 1.56	2 0.04	7 0.20	--	0.05	11	135	54
2S/10E-10B 1 M 4-15-64 5050			69	7.1	149	--	--	8 0.35	--	--	--	--	2 0.06	--	0.00	--	--	56
2S/10E-27H 1 M 5-29-64 5050			66	7.9	408	--	--	26 1.13	--	--	--	--	15 0.42	--	0.00	--	--	152
3S/ 8F-12H 1 M 8-11-64 5521			--	7.6	--	40 2.00	17 1.40	34 1.48	--	0	244 4.00	21 0.44	14 0.39	--	0.05	48	355	170
3S/ 8E-29E 1 M 8-11-64 5521			--	7.7	--	38 1.90	14 1.15	43 1.87	--	0	256 4.20	9 0.19	18 0.51	--	0.05	44	348	153
3S/ 9E-30 1 M 8-11-64 5521			--	7.4	--	18 0.90	9 0.74	22 0.96	--	0	128 2.10	4 0.08	14 0.39	--	0.05	33	192	82
3S/ 9E-9J 1 M 8-11-64 5521			--	7.7	--	38 1.90	16 1.32	26 1.13	--	0	217 3.56	16 0.33	14 0.39	--	0.05	42	301	161

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TABLE E-1
MINERAL ANALYSES OF GROUND WATER
SAN JOAQUIN DISTRICT

State Well Number			Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value						Mineral constituents in parts per million						
						Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180°C CoCo ₃
3S/10E-17K 1 M 8-11-64 5521			--	7.5	--	32 1.60	11 0.90	24 1.04	--	0	183 3.00	12 0.25	11 0.31	--	0.05	23	226	125
3S/10E-29K 1 M 8-11-64 5521			--	7.1	--	23 1.15	12 0.99	27 1.17	--	0	143 2.34	17 0.35	21 0.59	--	0.05	54	253	107
3S/11E-4N 1 M 4-15-64 5050			72	7.5	255	--	--	18 0.78	--	--	--	--	14 0.39	--	0.00	--	--	82
3S/12E-35C 1 M 2-20-64 5050			73	7.8	4190	--	--	415 18.04	--	--	--	--	1330 37.51	--	0.40	--	--	993
4S/ 9E-22C 1 M 6-30-64 5050			--	7.8	578	44 2.20 37	18 1.48 25	50 2.17 36	4 0.10 2	0	235 3.85 63	22 0.46 7	31 0.87 14	60.0 0.97 16	0.00	--	345 353	184
4S/ 9E-30R 1 M 3-26-64 5050			64	7.6	707	--	--	77 3.35	--	--	317 5.20	--	40 1.13	--	0.10	--	--	199
4S/11F-5M 2 M 7-29-64 5050			76	7.9	297	--	--	55 2.39	--	--	--	--	39 1.10	--	0.20	--	--	10
5S/ 7E-35A 1 M 7-29-64 5050			77	8.1	947	49 2.45 26	33 2.71 29	97 4.22 45	1 0.03	0	228 3.74 40	95 1.98 21	121 3.41 37	12.0 0.19 2	0.40	--	521 554	258
5S/ 8E-8G 1 M 3-26-64 5050			68	8.0	1750	--	--	152 6.61	--	--	381 6.24	--	181 5.10	--	0.80	--	--	626
5S/10E-28H 1 M 5-29-64 5050			68	8.0	443	--	--	43 1.87	--	--	--	--	16 0.45	--	0.00	--	--	130

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TABLE E-1

MINERAL ANALYSES OF GROUND WATER

SAN JOAQUIN DISTRICT

State Well Number		Temp. when Sampled °F	H p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in						milligrams per liter equivalents per million percent reactance value						Mineral constituents in parts per million				
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Barium B	Silica SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃			
6S/ 9E-18F 1 M 7-16-64 5641		--	8.2	625	--	--	40 1.74	--	--	--	--	16 0.45	--	--	0.30	--	--	240			
6S/10E-28K 1 M 7-29-64 5050		67	7.8	698	--	--	106 4.61	--	--	--	--	58 1.64	--	--	0.10	--	--	118			
6S/11E- 9C 1 M 2-20-64 5050		66	7.9	511	--	--	38 1.65	--	--	171 2.80	--	16 0.45	--	--	0.10	--	--	161			
7S/ 8E-23R 1 M 7- 1-64 5641		--	8.0	1550	--	--	136 5.91	--	--	--	--	304 8.57	--	--	0.40	--	--	445			
7S/ 9E-32H 1 M 7- 2-64 5641		--	8.2	1140	--	--	100 4.35	--	--	--	--	75 2.12	--	--	0.60	--	--	370			
7S/12E-19A 1 M 5-29-64 5050		67	7.8	279	--	--	20 0.87	--	--	--	--	5 0.14	--	--	0.00	--	--	98			
7S/13E- 4P 1 M 5-28-64 5050		68	7.5	325	--	--	23 1.00	--	--	--	--	10 0.28	--	--	0.00	--	--	107			
7S/15E-30E 1 M 7-29-64 5050		68	7.6	879	--	--	59 2.57	--	--	--	--	13 0.37	36.0 0.58	--	--	--	--	356			
8S/ 9E-12E 1 M 7-16-64 5641		--	8.3	2370	--	--	341 14.83	--	--	--	--	336 9.48	--	--	2.70	--	--	370			
8S/ 9E-16E 1 M 7-30-64 5050		66	8.3	1280	92 4.59 33	54 4.44 32	110 4.78 35	1 0.03	0	354 5.80 42	217 4.52 33	111 3.13 23	15.0 0.24 2	--	0.70	--	825	452			

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TABLE E-1
MINERAL ANALYSES OF GROUND WATER
SAN JOAQUIN DISTRICT

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million				
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chloride Cl	Ni- trate NO ₃	Fluoride F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180° C
9S/ 9E-21F 1 M 7- 1-64 5641		--	8.1	919	--	--	97 4.22	--	--	--	--	112 3.16	--	1.20	--	--	242
9S/10F-36R 1 M 7- 7-64 5641		--	8.2	1120	79 3.94 34	50 4.11 36	77 3.35 29	2 0.05	0	210 3.44 30	226 4.71 40	124 3.50 30	0.1	0.07	--	661 754	403
9S/13F-31D 1 M 8- 7-64 5641		--	8.1	773	--	--	91 3.96	--	--	--	--	126 3.55	--	0.00	--	--	164
10S/12E- 6K 1 M 7- 9-64 5641		--	8.3	881	--	--	114 4.96	--	--	--	--	140 3.95	--	0.30	--	--	146
10S/12E-35K 1 M 7-13-64 5641		--	8.2	2120	--	--	266 11.57	--	--	--	--	507 14.30	--	0.70	--	--	388
11S/10E-23K 1 M 7-20-64 5641		--	8.0	4270	--	--	422 18.35	--	--	--	--	754 21.26	94.0 1.52	1.80	--	--	1380
15S/25E- 30S1 M 6-10-64 5000		--	7.6	375	35 1.75 47	10 0.82 22	24 1.04 28	5 0.13 3	0	166 2.72 76	12 0.25 7	12 0.34 9	17.0 0.27 8	0.00	42	239 231	129
15S/26E- 5CS1 M 6-24-64 5000		--	7.6	401	48 2.40 54	13 1.07 24	20 0.87 20	3 0.08 2	0	230 3.77 87	13 0.27 6	8 0.23 5	2.7 0.04 1	0.10	67	288 289	174
17S/22E-19H 1 M 10- 7-63 5000		65	8.2	150	21 1.05	3 0.25	6 0.26	1 0.03	0	80 1.31	7 0.15	5 0.14	--	0.00	--	--	65
17S/23E- 1D 2 M 10- 7-63 5000		69	7.6	857	76 3.79	25 2.06	65 2.83	2 0.05	0	304 4.98	18 0.37	82 2.31	--	0.10	--	--	293

TABLE E-1

MINERAL ANALYSES OF GROUND WATER

SAN JOAQUIN DISTRICT

State Well Number			Temp. when Sampled ° F	H p	Specific conductance (micro-mhas at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
						Calcium Ca	Magne-sium Mg	Sodium Na	Potas-sium K	Carbon-ate CO ₃	Bicar-bonate HCO ₃	Sulfate SO ₄	Chlo-ride Cl	Ni-trate NO ₃	Fluo-ride F	Boron B	Sili-ca SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
17S/23E- 8J 2 M 3-26-64 5050			64	8.0	1080	--	--	104 4.52	--	--	--	--	115 3.24	--	0.10	--	--	321	
17S/25E-34P 1 M 3-26-64 5050			73	7.7	551	--	--	33 1.43	--	--	--	--	30 0.85	--	0.00	--	--	206	
18S/19E- 4J 1 M 3- 3-64 5000			69	8.6	1170	4 0.20 2	0.08 1	270 11.74 97	3 0.08 1	10 0.33 3	348 5.70 49	125 2.60 22	100 2.82 24	9.2 0.15 1	2.6	1.30	22	719	14
18S/24E-34L 1 M 9-30-64 5050			66	8.2	676	88 4.39 64	7 0.58 8	42 1.83 27	2 0.05 1	0 0.13 1	305 5.00 73	12 0.25 4	52 1.47 22	6.8 0.11 2	--	0.00	--	360 391	249
18S/26E-36C 1 M 9-30-64 5050			67	8.4	921	75 3.74 37	45 3.70 36	60 2.61 26	4 0.10 1	4 0.13 1	360 5.90 59	102 2.12 21	43 1.21 12	44.0 0.71 7	--	3.80	--	558 558	372
18S/27E-10C 2 M 9-30-64 5050			69	8.0	986	101 5.04 47	46 3.78 35	44 1.91 18	3 0.08 1	0	384 6.29 60	117 2.44 23	31 0.87 8	52.0 0.84 8	--	0.01	--	583 656	441
19S/21E- 38 1 M 5-21-64 5050			70	8.7	259	--	--	57 2.48	--	--	--	--	4 0.11	--	0.30	--	--	13	
19S/26E- 2K 2 M 9-30-64 5050			68	8.3	1000	109 5.44 53	26 2.14 21	58 2.52 25	4 0.10 1	0	330 5.41 53	72 1.50 15	93 2.62 26	38.0 0.61 6	--	1.00	--	563 635	379
20S/16E-20L 1 M 3-16-64			76	--	--	--	--	--	--	--	--	968 20.15	185 5.22	--	2.10	--	--	--	--
20S/16E-28F 1 M 3-17-64 5050			60	--	--	--	--	--	--	--	--	952 19.82	129 3.64	--	2.50	--	--	--	--

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STATE OF CALIFORNIA - THE RESOURCES AGENCY OF CALIFORNIA - DEPARTMENT OF WATER RESOURCES

TABLE E-1
MINERAL ANALYSES OF GROUND WATER
SAN JOAQUIN DISTRICT

State Well Number		Temp. when Sampled °F	H _p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in						milligrams per liter equivalents per million percent reactance value					Mineral constituents in parts per million				
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	IDS Computed Evap 180° C	TOTAL hardness as CaCO ₃		
20S/16F-32D 1 M 3-17-64 5050		71	--	--	--	--	--	--	--	--	--	1049 21.84	146 4.12	--	--	1.40	--	--	702	
20S/16E-32M 1 M 2-29-64 5050		64	7.3	3750	281 14.02	--	472 20.52	--	0	217 3.56	1918 39.93	--	--	--	--	2.20	--	--	702	
20S/16E-36N 1 M 3-18-64 5050		--	--	--	--	--	--	--	--	--	719 14.97	88 2.48	--	--	0.70	--	--	--	113	
20S/16E-36Q 1 M 2-29-64 5050		78	7.9	1480	45 2.25	--	265 11.52	--	0	107 1.75	531 11.06	--	--	--	0.70	--	--	--	25	
20S/20E-10L 1 M 5-21-64 5050		71	8.2	833	--	--	186 8.09	--	--	--	--	36 1.02	--	--	1.50	--	--	--	396	
20S/21E-12A 1 M 7-29-64 5050		76	7.8	1430	114 5.69 39	27 2.22 15	154 6.70 46	1 0.03	0	378 6.20 42	92 1.92 13	233 6.57 45	0.6 0.01	--	0.20	--	--	808 813	1538	
20S/26E-3D 1 M 9-30-64 5050		72	8.1	5170	260 12.97 26	216 17.76 36	431 18.74 38	10 0.26 1	0	592 9.70 19	42 0.87 2	1420 40.04 78	36.0 0.58 1	--	3.60	--	--	2710 3530	1096	
21S/16E-1N 1 M 3-17-64 5050		72	7.7	2250	213 10.63 29	137 11.27 31	325 14.13 39	13 0.33 1	0	170 2.79 34	192 4.00 49	47 1.33 16	0.0	0.2	0.60	43	1054 2141	454	275	
21S/16E-2R 1 M 3-18-64 5050		73	--	--	182 9.08	--	226 9.83	--	--	--	1140 23.73	205 5.78	--	--	0.50	--	--	--	275	
21S/16E-4E 1 M 2-29-64 5050		--	7.4	1860	110 5.49	--	263 11.44	--	0	167 2.74	803 16.72	--	--	--	1.10	--	--	--	275	

MINERAL ANALYSES OF GROUND WATER

SAN JOAQUIN DISTRICT

State Well Number		Temp. when Sampled °F	pH	Specific conductance (microhmhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million					
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlor- ide Cl	Ni- trate NO ₃	Fluor- ide F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180°C
21S/16E-4E 2 M 3-19-64		74	--	--	--	--	--	--	--	--	--	--	--	1.50	--	--	257
21S/16E-4N 2 M 2-29-64 5050		73	7.5	1800	103 5.14	--	247 10.74	--	0	184 3.02	770 16.03	--	--	1.10	--	--	257
21S/16E-5P 1 M 3-16-64 5050		72	7.6	2100	142 7.09 24	107 8.80 30	315 13.70 46	8 0.20 1	0	213 3.49 12	1014 21.11 71	182 5.13 17	0.5 0.01	1.30	38	2002	795
21S/16E-8K 1 M 2-29-64 5050		71	8.0	1950	105 5.24	--	240 10.44	--	0	217 3.56	675 14.05	--	--	0.90	--	--	262
21S/16E-10F 1 M 2-29-64 5050		76	7.4	2150	166 8.28	--	253 11.00	--	0	116 1.90	961 20.01	142 4.00	--	0.50	--	--	414
21S/16E-10N 1 M 3-18-64 5050		74	7.6	1250	83 4.14 24	49 4.03 24	200 8.70 51	3 0.08	0	175 2.87 17	503 10.47 62	127 3.58 21	1.1 0.02	0.60	40	1087	409
21S/16E-11E 1 M 2-29-64 5050		72	7.4	1750	145 7.24	--	202 8.78	--	0	120 1.97	864 17.99	102 2.88	--	0.50	--	--	362
21S/16E-14M 1 M 2-29-64 5050		72	7.6	1110	62 3.09	--	153 6.65	--	0	155 2.54	417 8.68	--	--	0.50	--	--	155
21S/18E-17M 1 M 5-21-64 5050		78	8.0	1200	--	--	118 5.13	--	--	--	--	26 0.73	--	0.40	--	--	374
21S/22E-22M 2 M 4-14-64 5050		64	7.7	1160	--	--	209 9.09	--	--	--	--	154 4.34	--	0.40	--	--	121

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TABLE E-1
MINERAL ANALYSES OF GROUND WATER
SAN JOAQUIN DISTRICT

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value						Mineral constituents in parts per million							
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
21S/25E-27L 2 M 3-26-64 5050		70	8.0	165	7 0.35 20	0	31 1.35 78	1 0.03 2	0	82 1.34 84	4 0.08 5	6 0.17 11	0.8 0.01 1	0.00	--	--	104	18
21S/27E-15P 2 M 3-26-64 5050		69	7.8	558	--	--	27 1.17	--	--	284 4.65	--	22 0.62	17.0 0.27	0.00	--	--	--	233
21S/27E-21K 1 M 8-11-64 5050		64	--	--	--	--	--	--	--	--	--	--	41.0 0.66	--	--	--	--	--
21S/27E-22E 1 M 8-11-64 5050		64	8.3	642	76 3.79 57	17 1.40 21	31 1.35 20	3 0.08 1	0	288 4.72 71	17 0.35 5	34 0.96 15	36.0 0.58 9	0.10	--	--	356 391	260
21S/27E-22J 1 M 8-11-64 5050		72	--	--	--	--	--	--	--	--	--	--	24.0 0.39	--	--	--	--	--
21S/27E-23L 1 M 8-11-64 5050		73	--	--	--	--	--	--	--	--	--	--	18.0 0.29	--	--	--	--	--
21S/27E-26F 2 M 8-11-64 5050		66	--	--	--	--	--	--	--	--	--	--	5.2 0.08	--	--	--	--	--
21S/27E-26P 1 M 8-11-64 5050		67	--	--	--	--	--	--	--	--	--	--	0.8 0.01	--	--	--	--	--
21S/27E-27C 1 M 8-10-64 5050		68	--	--	--	--	--	--	--	--	--	--	7.6 0.12	--	--	--	--	--
21S/27E-27F 1 M 8-12-64 5050		72	7.8	608	52 2.59 43	2 0.16 3	71 3.09 51	7 0.18 3	0	203 3.33 57	30 0.62 11	43 1.21 21	43.0 0.69 12	0.60	--	--	348 382	138

MINERAL ANALYSES OF GROUND WATER

SAN JOAQUIN DISTRICT

State Well Number		Temp when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					
					Calcium Co	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	IDS Computed Evap 180°C	TOTAL hardness as CaCO ₃
21S/27E-27G 1 M 8-10-64 5050		68	--	--	--	--	--	--	--	--	--	--	13.0 0.21	--	--	--	--	--
21S/27E-27L 1 M 8-10-64 5050		74	8.0	363	49 2.45 67	0	26 1.13 31	2 0.05 1	0	164 2.69 75	12 0.25 7	13 0.37 10	16.0 0.26 7	--	0.10	--	199 220	123
21S/27E-27R 1 M 8-11-64 5050		72	--	--	--	--	--	--	--	--	--	--	7.6 0.12	--	--	--	--	--
21S/27E-28A 1 M 8-10-64 5050		71	--	--	--	--	--	--	--	--	--	--	18.0 0.29	--	--	--	--	--
21S/27E-28K 1 M 8-11-64 5050		72	--	--	--	--	--	--	--	--	--	--	20.0 0.32	--	--	--	--	--
21S/27E-28N 1 M 8-11-64 5050		66	--	--	--	--	--	--	--	--	--	--	14.0 0.23	--	--	--	--	--
21S/27E-34B 1 M 8-11-64 5050		67	--	--	--	--	--	--	--	--	--	--	0.9 0.01	--	--	--	--	--
21S/27E-34D 1 M 8-11-64 5050		72	--	--	--	--	--	--	--	--	--	--	9.5 0.15	--	--	--	--	--
24S/22E-35N 1 M 4-21-64 5050		69	8.2	439	11 0.55 13	2 0.16 4	83 3.61 84	0	0	173 2.84 66	50 1.04 24	14 0.39 9	1.0 0.02	--	0.20	--	246 268	36
24S/23E- 5R 2 M 7-29-64 5050		79	7.8	559	--	--	86 3.74	--	--	--	--	73 2.06	--	--	0.20	--	--	55

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STATE OF CALIFORNIA - THE RESOURCES AGENCY OF CALIFORNIA - DEPARTMENT OF WATER RESOURCES

TABLE E-1
MINERAL ANALYSES OF GROUND WATER
SAN JOAQUIN DISTRICT

State Well Number			Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value						Mineral constituents in parts per million				
Date Sampled Time	Agy. Coll.	Calcium				Magne-sium	Sodium	Potas-sium	Carbon-ate	Bicar-bonate	Sulfate	Chlo-ride	Ni-trate	Fluo-ride	Boran	Sili-ca
		Ca	Mg	Na	K	CO ₃	HCO ₃	SO ₄	Cl	NO ₃	F	B	SiO ₂	Evap 180°C		
25S/18E-3N 2 M 8-27-64 5050	74	8.2	3470	--	--	--	0	112 1.84	--	593 16.72	--	--	--	--	1170	
25S/19E-6D 2 M 8-27-64 5050	79	8.2	4270	--	--	--	0	130 2.13	--	518 14.61	--	--	--	--	1120	
25S/19E-7P 1 M 8-27-64 5050	78	8.3	5220	--	--	--	0	155 2.54	--	424 11.96	--	--	--	--	1270	
25S/22E-2P 2 M 8-26-64 5050	70	8.9	383	--	--	--	7 0.23	77 1.26	--	19 0.54	--	--	--	--	16	
25S/23E-11J 1 M 8-26-64 5050	--	8.0	161	--	--	--	0	79 1.29	--	4 0.11	--	--	--	--	4	
25S/23E-28D 3 M 5-6-64 5050	69	9.1	192	1 0.05 3	1 0.08 5	37 1.61 93	0	26 0.87 49	48 0.79 44	2 0.04 2	3 0.08 4	0.3	--	0.10	94 110	7
25S/24E-15H 1 M 5-5-64 5050	69	7.1	1700	285 14.22 77	2 0.16 1	92 4.00 22	1 0.03	0	39 0.64 3	580 12.08 66	189 5.33 29	22.0 0.35 2	--	0.00	1190 1340	720
25S/24E-27R 1 M 8-27-64 5050	80	8.4	873	--	--	--	4 0.13	118 1.93	--	53 1.49	--	--	--	--	279	
25S/25E-40 1 M 8-26-64 5050	73	8.2	419	--	--	--	0	119 1.95	--	30 0.85	--	--	--	--	108	
25S/25E-22D 1 M 5-5-64 5050	70	7.4	615	14 0.70 14	0	96 4.17 85	1 0.03 1	0	31 0.51 10	92 1.92 38	86 2.43 49	7.8 0.13 3	--	0.00	312 681	35

MINERAL ANALYSES OF GROUND WATER

SAN JOAQUIN DISTRICT

State Well Number		Temp when Sampled ° F	H p	Specific conductance (micro-mhos at 25 C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million				
					Calcium Ca	Magne-sium Mg	Sodium Na	Potas-sium K	Carban-ate CO 3	Bicar-bonate HCO 3	Sulfate SO 4	Chlo-ride Cl	Ni-trate NO 3	Fluo-ride F	Boron B	Sili-ca SiO 2	TOTAL hardness as CaCO 3
25S/25E-22D 2 M 5- 5-64 5050	Agy. Coll.	70	7.8	368	4	1	69	0	0	49	49	49	1.2	--	0.10	--	197
					0.20	0.08	3.00			0.80	1.02	1.38	0.02	232			
25S/26E- 1R 1 M 8-26-64 5050		78	8.4	362	--	--	--	--	1	99	--	23	--	--	--	--	50
								0.03	1.62	0.65							
25S/26E-16P 1 M 5- 4-64 5050		69	7.8	428	27	7	50	2	0	137	82	7	6.5	--	0.10	--	249
					1.35	0.58	2.17	0.05	2.25	1.71	0.20	0.10	269				
25S/26E-16P 2 M 5- 4-64 5050		69	7.2	292	33	14	52	1		53	40	5	2	--	0.00	--	149
25S/27E- 4C 1 M 8-26-64 5050		87	8.6	492	2	2	52	1	0	91	27	19	0.9	--	--	--	52
					0.10	0.16	2.26	0.03	1.49	0.56	0.54	0.01	38	1.07			
26S/22E-10G 2 M 8-26-64 5050		71	8.2	268	--	--	--	--	0	85	--	21	--	--	--	--	12
									1.39		0.59						
26S/22E-27Q 1 M 8-26-64 5050		74	8.1	2530	--	--	--	--	0	81	--	611	--	--	--	--	264
									1.33		17.23						
26S/23E- 3E 1 M 8-26-64 5050		72	7.9	565	--	--	--	--	0	53	--	113	--	--	--	--	102
									0.87		3.19						
26S/24E-26R 1 M 8-27-64 5050		74	9.0	199	--	--	--	--	8	58	--	10	--	--	--	--	27
									0.27	0.95	0.28						
26S/25E- 3R 1 M 8-27-64 5050		74	8.2	564	--	--	--	--	0	96	--	47	--	--	--	--	139
									1.57		1.33						

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TABLE E-1
MINERAL ANALYSES OF GROUND WATER
SAN JOAQUIN DISTRICT

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million					
Date Sampled Time	Agy. Coll.				Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boron B	Sili- co SiO ₂	IDS Computed Evap 180° C
26S/27E- 9G 1 M 8-26-64 5050		82	8.0	1720	--	--	103 4.48	--	--	--	210 5.92	0.7 0.01	--	--	--	659	
27S/19E-28H 1 M 8-27-64 5050		--	8.2	10500	--	--	--	0	132 2.16	--	1800 50.76	--	--	--	--	2420	
27S/20E-34G 1 M 8-27-64 5050		--	8.4	558	--	--	--	2 0.07	128 2.10	--	70 1.97	--	--	--	--	8	
27S/22E- 2Q 2 M 9-15-64 5050		78	8.2	2480	--	--	--	0	64 1.05	--	698 19.68	--	--	--	--	194	
27S/22E-21P 2 M 8-26-64 5050		69	7.9	4000	--	--	--	0	76 1.25	--	1010 28.48	--	--	--	--	760	
27S/23E- 1R 1 M 5- 6-64 5050		69	7.4	3360	317 15.82 46	8 0.66 2	418 18.17 52	2 0.05	87 1.43 4	994 20.70 59	461 13.00 37	13.0 0.21 1	--	0.10	--	2256 2390	825
27S/23E- 1R 3 M 5- 6-64 5050		70	8.2	218	15 0.75 36	0	31 1.35 64	0	115 1.88 90	3 0.06 3	5 0.14 7	0.9 0.01	--	0.10	--	112 120	38
27S/23E- 1R 4 M 5- 6-64 5050		70	7.6	184	4 0.20 11	1 0.08 4	37 1.61 85	0	84 1.38 76	12 0.25 14	6 0.17 9	0.6 0.01 1	--	0.00	--	102 131	14
27S/23E- 1R 5 M 5- 6-64 5050		70	8.2	249	1 0.05 2	0	52 2.26 99	0	92 1.51 64	0	30 0.85 36	0.6 0.01	--	0.20	--	129 148	3
27S/23E-27J 1 M 9-15-64 5050		81	8.2	1500	--	--	--	0	77 1.26	--	105 2.96	--	--	--	--	187	

MINERAL ANALYSES OF GROUND WATER

SAN JOAQUIN DISTRICT

State Well Number			Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million				
Date Sampled Time	Agg. Coll.	Ca	Magne-sium	Sodium	Potas-sium	Carbon-ate	Bicar-bonate	Sulfate	Chlo-ride	Ni-tro-le	Fluo-ride	Baron	Sili-ca	ID5 Computed	TOTAL hardness as CaCO 3			
		Ca	Mg	Na	K	CO 3	HCO 3	SO 4	Cl	NO 3	F	B	SiO 2	Evap 180 °C	CaCO 3			
27S/24E- 1L 2 M 5- 7-64 5050		45 2.25 56	5 0.41 10	31 1.35 33	1 0.03 1	0	95 1.56 39	40 0.83 21	41 1.16 29	28.0 0.45 11	--	0.00	--	238 294	133			
27S/24E- 1L 3 M 5- 7-64 5050		4 0.20 14	1 0.08 5	27 1.17 79	1 0.03 2	2 0.07 5	54 0.89 64	13 0.27 20	5 0.14 10	0.4 0.01 1	--	0.00	--	80 98	14			
27S/24E- 1L 4 M 5- 7-64 5050		2 0.10 7	1 0.08 6	27 1.17 87	0	0	60 0.98 72	10 0.21 15	5 0.14 10	2.0 0.03 2	--	0.00	--	77 104	9			
27S/24E- 5R 1 M 9-15-64 5050		--	--	--	--	0	58 0.95	--	6 0.17	--	--	--	--	--	14			
27S/24E-31E 1 M 8-27-64 5050		--	--	--	--	2 0.07	64 1.05	--	70 1.97	--	--	--	--	--	103			
27S/24E-34F 1 M 9-15-64 5050		--	--	--	--	0	60 0.98	--	18 0.51	--	--	--	--	--	28			
27S/25E- 1N 1 M 5- 6-64 5050		35 1.75 44	7 0.58 15	37 1.61 40	2 0.05 1	0	158 2.59 66	44 0.92 24	11 0.31 8	5.4 0.09 2	--	0.10	--	219 264	117			
27S/25E- 1N 3 M 5- 6-64 5050		1 0.05 4	1 0.08 7	24 1.04 87	1 0.03 3	0	47 0.77 69	6 0.12 11	7 0.20 18	1.0 0.02 2	--	0.00	--	64 70	7			
27S/25E- 5R 1 M 9-15-64 5050		--	--	--	--	4 0.13	138 2.26	--	9 0.25	--	--	--	--	--	104			
27S/25E-34A 2 M 9-15-64 5050		--	--	--	--	0	135 2.21	--	14 0.39	--	--	--	--	--	140			

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TABLE E-1
MINERAL ANALYSES OF GROUND WATER
SAN JOAQUIN DISTRICT

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlor- ide Cl	Ni- trate NO ₃	Fluor- ide F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
27S/26E-22H 1 M 9-24-64 5703		--	7.7	769	58 2.89	10 0.82	84 3.65	4 0.10	0	122 2.00	15 0.31	164 4.62	--	0.0	0.79	--	396	186
27S/26E-22Q 1 M 9-21-64 5703		--	8.6	303	7 0.35	5 0.41	51 2.22	3 0.08	8 0.27	91 1.49	14 0.29	34 0.96	--	0.2	0.36	--	169	38
27S/26E-25J 1 M 9-16-64 5703		--	8.0	581	14 0.70	15 1.23	108 4.70	20 0.51	0	110 1.80	77 1.60	130 3.67	--	0.1	0.15	--	419	97
27S/26E-27A 1 M 8- 6-64 5703		--	8.5	606	14 0.70	5 0.41	80 3.48	4 0.10	16 0.53	137 2.25	9 0.19	55 1.55	--	0.8	0.28	--	251	56
27S/26E-27R 1 M 8- 6-64 5703		--	7.5	2500	235 11.73	47 3.87	62 2.70	5 0.13	0	218 3.57	148 3.08	411 11.59	--	0.0	0.06	--	1017	781
28S/22E- 9D 1 M 5- 7-64 5050		67	6.9	3920	206 10.28	46 3.78	588 25.57	5 0.13	0	166 2.72	731 15.22	776 21.88	0.7 0.01	--	3.30	--	2438 2570	704
28S/22E- 9D 2 M 5- 7-64 5050		67	7.2	4650	254 12.67	50 4.11	752 32.70	6 0.15	0	277 4.54	983 20.47	846 23.86	0.8 0.01	--	4.30	--	3032 3180	840
28S/22E-10R 1 M 8-27-64 5050		--	8.1	1410	--	--	--	--	0	95 1.56	--	127 3.58	--	--	--	--	197	
28S/22E-26J 1 M 9-14-64 5050		82	8.4	712	--	--	--	--	4 0.13	127 2.08	--	58 1.64	--	--	--	--	101	
28S/23E-25H-2-M 5-29-64 5050		--	8.1	1090	80 3.99	2 0.16	134 5.83	1 0.03	0	31 0.51	202 4.21	228 6.43	17.0 0.27	--	0.00	--	679 641	208

TABLE E-1

MINERAL ANALYSES OF GROUND WATER

SAN JOAQUIN DISTRICT

State Well Number		Temp. when Sampled °F	H p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million				
Date Sampled Time	Agy. Coll.				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180° C
28S/23E-25P 1 M 9-14-64 5050		71	7.8	399	--	--	--	0	45 0.74	--	49 1.38	--	--	--	--	--	36
28S/24E-1F 1 M 6-23-64 5050		73	8.1	471	52 2.59 61	1 0.08 2	35 1.52 36	1 0.03 1	0	66 1.08 25	73 1.52 36	40 1.13 26	34.0 0.55 13	--	0.00	--	268 300 134
28S/24E-2B 1 M 6-23-64 5050		75	8.3	215	15 0.75 36	0 0.03 1	30 1.30 63	1 0.03 1	0	71 1.16 58	17 0.35 18	15 0.42 21	4.2 0.07 4	--	0.00	--	117 140 38
28S/24E-2P 1 M 6-23-64 5050		75	8.4	205	13 0.65 33	0 0.03 2	30 1.30 66	1 0.03 2	1 0.03 2	62 1.02 53	18 0.37 19	16 0.45 23	3.1 0.05 3	--	0.00	--	113 135 33
28S/24E-3N 1 M 6-24-64 5050		75	8.6	170	7 0.35 21	0 0.03 2	30 1.30 77	1 0.03 2	2 0.07 4	56 0.92 57	13 0.27 17	11 0.31 19	2.2 0.04 2	--	0.00	--	94 114 18
28S/24E-3Q 1 M 3-31-64 5050		75	7.7	190	9 0.45 26	0 0.03 2	28 1.22 72	1 0.03 2	0	60 0.98 60	13 0.27 16	13 0.37 23	1.3 0.02 1	--	0.10	--	95 116 23
28S/24E-6F 1 M 3-31-64 5050		75	7.8	696	63 3.14 51	0 0.03 1	68 2.96 48	1 0.03 1	0	38 0.62 10	133 2.77 46	91 2.57 42	5.3 0.09 1	--	0.10	--	380 436 157
7-6F 1 M 7-9-64 5050		74	8.4	590	47 2.35 45	0 0.03 1	65 2.83 54	1 0.03 1	0	40 0.66 13	121 2.52 48	70 1.97 38	5.5 0.09 2	--	0.10	--	329 355 118
28S/24E-7B 1 M 7-9-64 5050		76	8.8	298	16 0.80 31	0 0.03 1	40 1.74 68	1 0.03 1	4 0.13 5	41 0.67 26	45 0.94 37	27 0.76 30	2.3 0.04 2	--	0.10	--	156 177 40
28S/24E-9H 1 M 7-9-64 5050		76	8.5	224	9 0.45 22	0 0.03 1	36 1.57 77	1 0.03 1	1 0.03 2	52 0.85 44	20 0.42 22	22 0.62 32	2.0 0.03 2	--	0.10	--	117 139 23

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TABLE E-1
MINERAL ANALYSES OF GROUND WATER
SAN JOAQUIN DISTRICT

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180° CaCO ₃	TOTAL hardness as CaCO ₃
28S/24E-11A 1 M 6-23-64 5050		73	8.3	447	41 2.05 50	1 0.08 2	44 1.91 47	1 0.03 1	0	69 1.13 28	53 1.10 28	44 1.24 31	32.0 0.52 13	--	0.10	--	250 268	107
28S/24E-11F 3 M 7- 9-64 5050		75	8.3	205	11 0.55 28	0	31 1.35 70	1 0.03 2	0	66 1.08 58	15 0.31 17	16 0.45 24	1.7 0.03 2	--	0.10	--	108 129	28
28S/24E-12A 1 M 6-23-64 5050		82	8.2	260	25 1.25 49	0	29 1.26 50	1 0.03 1	0	79 1.29 52	20 0.42 17	21 0.59 24	9.7 0.16 7	--	0.00	--	145 169	63
28S/24E-12D 1 M 6-24-64 5050		75	8.1	377	35 1.75 53	0	35 1.52 46	1 0.03 1	0	78 1.28 39	41 0.85 26	30 0.85 26	21.0 0.34 10	--	0.00	--	201 235	88
28S/24E-16A 1 M 6-23-64 5050		79	8.6	257	12 0.60 27	0	38 1.65 73	0	3 0.10 4	45 0.74 31	19 0.40 17	36 1.02 43	7.3 0.12 5	--	0.10	--	138 140	30
28S/24E-23D 2 M 4- 9-64 5050		72	7.1	176	4 0.20 12	0	33 1.43 88	0	0	70 1.15 67	9 0.19 11	13 0.37 22	0.9 0.01 1	--	0.20	--	95 130	10
28S/24E-23D 3 M 4- 9-64 5050		72	7.5	323	3 0.15 5	1 0.08 3	59 2.57 92	1	0	56 0.92 32	0	70 1.97 68	0.4 0.01	--	0.20	--	161 183	12
28S/24E-26D 1 M 6-23-64 5050		80	8.2	173	4 0.20 12	0	33 1.43 88	0	0	70 1.15 70	12 0.25 15	8 0.23 14	1.3 0.02 1	--	0.10	--	93 107	10
28S/24E-30F 1 M 6-23-64 5050		73	8.0	230	8 0.40 20	0	37 1.61 80	0	0	55 0.90 43	19 0.40 19	28 0.79 38	0.4 0.01	--	0.10	--	120 140	20
28S/24E-31A 1 M 6-24-64 5050		70	8.5	516	28 1.40 32	0	69 3.00 68	1 0.03 1	3 0.10 2	40 0.66 15	52 1.08 25	89 2.51 57	3.2 0.05 1	--	0.10	--	265 280	70

MINERAL ANALYSES OF GROUND WATER

SAN JOAQUIN DISTRICT

State Well Number			Temp. when Sampled °F	H p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million				
Date Sampled Time	Agy. Coll.	Calcium Ca				Magne-sium Mg	Sodium Na	Potas-sium K	Carbon-ate CO ₃	Bicar-bonate HCO ₃	Sulfate SO ₄	Chlo-ride Cl	Ni-trate NO ₃	Fluo-ride F	Boron B	Sili-ca SiO ₂	IDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
28S/24E-31D 1 M 6-24-64 5050		5 0.25 14	0	34 1.48 86	0	8 0.27 16	30 0.49 28	19 0.40 23	20 0.56 32	1.1 0.02 1	--	0.00	--	102 113	13			
28S/24E-32P 1 M 6-23-64 5050		13 0.65 31	0	33 1.43 69	0	4 0.13 6	43 0.70 32	38 0.79 36	16 0.45 21	7.3 0.12 5	--	0.20	--	133 126	33			
28S/24E-36R 1 M 6-24-64 5050		73 3.64 56	1 0.08 1	62 2.70 42	2 0.05 1	0	55 0.90 14	119 2.48 28	111 3.13 47	6.0 0.10 2	--	0.10	--	401 446	186			
28S/25E- 2A 1 M 6-23-64 5050		69 3.44 62	8 0.66 12	31 1.35 24	3 0.08 1	0	97 1.59 29	111 2.31 42	36 1.02 18	39.0 0.63 11	--	0.00	--	345 385	205			
28S/25E- 2K 1 M 6-23-64 5050		73 3.64 61	6 0.49 8	41 1.78 30	2 0.05 1	0	97 1.59 27	126 2.62 44	38 1.07 18	42.0 0.69 11	--	0.00	--	376 414	207			
28S/25E- 4F 1 M 7- 9-64 5050		72 3.59 63	6 0.49 9	36 1.57 28	2 0.05 1	0	141 2.31 42	58 1.21 22	25 0.71 13	81.0 1.31 24	--	0.10	--	349 388	204			
28S/25E- 4P 2 M 6-23-64 5050		64 3.19 60	4 0.33 6	40 1.74 33	2 0.05 1	0	92 1.51 29	89 1.85 35	40 1.13 22	47.0 0.76 14	--	0.00	--	331 368	176			
28S/25E- 9E 2 M 6-24-64 5050		69 3.44 47	16 1.32 18	57 2.48 34	1 0.03	0	91 1.49 22	94 1.96 29	71 2.00 30	77.0 1.24 19	--	0.10	--	430 504	238			
28S/25E-10B 1 M 3-31-64 5050		74 3.69 60	5 0.41 7	45 1.96 32	3 0.08 1	0	98 1.61 27	134 2.79 47	39 1.10 18	30.0 0.48 8	--	0.10	--	378 438	205			
28S/25E-13C 1 M 6-25-64 5050		36 1.80 40	2 0.16 4	58 2.52 56	1 0.03 1	0	113 1.85 41	93 1.94 43	19 0.54 12	14.0 0.23 5	--	0.10	--	279 301	98			

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TABLE E-1
MINERAL ANALYSES OF GROUND WATER
SAN JOAQUIN DISTRICT

Stake Well Number		Temp when Sampled °F	H _p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million					
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180°C CaCO ₃
28S/25E-17L 1 M 9-14-64 5050		72	8.2	234	--	--	--	--	0	89 1.46	--	13 0.37	--	--	--	--	35
28S/25E-20D 1 M 6-23-64 5050		74	8.1	687	56 2.79 43	5 0.41 6	75 3.26 50	1 0.03	0	85 1.39 21	148 3.08 47	57 1.61 25	29.0 0.47 7	0.10	--	413 435	160
28S/25E-22F 1 M 6-23-64 5050		73	8.0	2120	275 13.72 66	17 1.40 7	125 5.44 26	3 0.08	0	61 1.00 5	365 7.60 36	431 12.15 58	20.0 0.32 2	0.10	--	1266 1440	757
28S/25E-24P 1 M 6-25-64 5050		75	8.1	2900	456 22.75 70	15 1.23 4	195 8.48 26	4 0.10	0	81 1.33 4	940 19.57 61	368 10.38 32	54.0 0.87 3	0.10	--	2072 2270	1200
28S/25E-25L 1 M 6-24-64 5050		75	8.2	466	47 2.35 57	0	40 1.74 42	2 0.05 1	0	59 0.97 23	71 1.48 35	60 1.69 40	3.8 0.06 1	0.10	--	253 268	118
28S/25E-27L 1 M 4-28-64 5050		74	7.8	1230	160 7.98 67	6 0.49 4	77 3.35 28	2 0.05	0	88 1.44 12	235 4.89 42	186 5.25 45	8.2 0.13 1	0.20	--	718 902	424
28S/25E-28P 2 M 4-28-64 5050		--	8.2	166	7 0.35 23	1 0.08 5	25 1.09 70	1 0.03 2	0	64 1.05 71	7 0.15 10	9 0.25 17	1.0 0.02 1	0.10	--	83 106	22
28S/25E-30G 1 M 6-23-64 5050		75	8.0	306	16 0.80 30	0	42 1.83 69	1 0.03 1	0	66 1.08 41	37 0.77 29	26 0.73 28	4.2 0.07 3	0.10	--	159 175	40
28S/25E-32L 1 M 4-28-64 5050		74	7.8	344	26 1.30 44	0	37 1.61 55	1 0.03 1	0	64 1.05 35	43 0.90 30	37 1.04 34	2.9 0.05 2	0.10	--	178 203	65
28S/25E-32P 1 M 6-24-64 5050		75	8.6	166	8 0.40 24	0	28 1.22 74	1 0.03 2	3 0.10 6	58 0.95 61	13 0.27 17	8 0.23 15	1.2 0.02 1	0.10	--	91 109	20

MINERAL ANALYSES OF GROUND WATER

SAN JOAQUIN DISTRICT

State Well Number			Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million					
Date Sampled Time	Agg. Coll.	Calcium Ca				Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
28S/25E-35Q 2 M 4-29-64 5050		28 1.40 56	0	25 1.09 43	1 0.03 1	0	85 1.39 55	20 0.42 17	24 0.68 27	1.5 0.02 1	--	0.10	--	141 181	70			
28S/25E-36C 1 M 6-25-64 5050		32 1.60 52	1 0.08 3	31 1.35 44	2 0.05 2	2 0.07 2	70 1.15 37	45 0.94 30	33 0.93 30	1.4 0.02 1	--	0.10	--	182 202	84			
28S/26E-21H 2 M 4-10-64 5050		2 0.10 3	1 0.08 2	73 3.17 94	1 0.03 1	23 0.77 23	65 1.07 32	25 0.52 15	36 1.02 30	0.4 0.01	--	0.20	--	194 221	9			
28S/26E-21H 3 M 4-10-64 5050		4 0.20 6	0	78 3.39 94	1 0.03 1	0	63 1.03 29	0	88 2.48 70	0.4 0.01	--	0.20	--	203 226	10			
28S/26E-30A 1 M 9-14-64 5050		--	--	--	--	0	76 1.25	--	112 3.16	--	--	--	--	--	368			
28S/27E-7C 1 M 9-14-64 5050		--	--	--	--	0	92 1.51	--	41 1.16	--	--	--	--	--	6			
28S/27E-28L 1 M 9-14-64 5050		--	--	--	--	0	74 1.21	--	17 0.48	--	--	--	--	--	8			
29S/22E-1C 1 M 8-27-64 5050		--	--	--	--	0	304 4.98	--	2370 66.83	--	--	--	--	--	2660			
29S/24E-1H 1 M 3-31-64 5050		6 0.30 20	0	27 1.17 78	1 0.03 2	0	62 1.02 69	9 0.19 13	9 0.25 17	0.9 0.01 1	--	0.10	--	83 114	15			
29S/24E-4D 1 M 6-23-64 5050		14 0.70 21	1 0.08 2	57 2.48 76	0	0	31 0.51 15	76 1.58 47	40 1.13 34	6.8 0.11 3	--	0.10	--	210 194	39			

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TABLE E-1
MINERAL ANALYSES OF GROUND WATER
SAN JOAQUIN DISTRICT

State Well Number			Temp. when Sampled °F	pH	Specific conductance (microhmhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value						Mineral constituents in parts per million				
Date Sampled Time	Avg. Coll.	Calcium Ca				Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂
29S/24E- 4M 1 M 4-29-64 5050		8 0.40 18	0	42 1.83 81	1 0.03 1	4 0.13 6	27 0.44 20	20 0.42 19	43 1.21 55	0.9 0.01	--	0.10	--	132 142	20	
29S/24E- 7C 1 M 6-23-64 5050		6 0.30 10	0	64 2.78 90	0	6 0.20 6	51 0.84 27	4 0.08 3	68 1.92 61	6.3 0.10 3	--	0.20	--	180 182	15	
29S/24E- 8N 1 M 6-23-64 5050		56 2.79 23	1 0.08 1	216 9.39 76	1 0.03	0	115 1.88 15	146 3.04 25	262 7.39 60	3.8 0.06	--	0.70	--	743 757	144	
29S/24E-21B 1 M 6-23-64 5050		3 0.15 9	0	35 1.52 91	0	10 0.33 20	36 0.59 36	13 0.27 17	15 0.42 26	0.6 0.01 1	--	0.00	--	94 113	8	
29S/24E-24F 1 M 6-24-64 5050		30 1.50 35	0	62 2.70 64	1 0.03 1	0	73 1.20 28	102 2.12 49	27 0.76 18	14.0 0.23 5	--	0.10	--	272 292	75	
29S/24E-33P 3 M 7- 9-64 5050		152 7.58 62	10 0.82 7	88 3.83 31	2 0.05	0	254 4.16 33	349 7.27 58	40 1.13 9	0.0	--	0.50	--	766 819	420	
29S/25E- 3N 1 M 6-24-64 5050		24 1.20 43	1 0.08 3	34 1.48 53	1 0.03 1	1 0.03 1	69 1.13 41	43 0.90 32	22 0.62 22	5.8 0.09 3	--	0.10	--	166 182	64	
29S/25E- 5A 1 M 4-28-64 5050		61 3.04 46	3 0.25 4	74 3.22 49	2 0.05 1	0	125 2.05 31	103 2.14 32	78 2.20 33	15.0 0.24 4	--	0.10	--	398 435	165	
29S/25E- 5G 1 M 3-31-64 5050		10 0.50 29	0	28 1.22 70	1 0.03 2	0	68 1.11 64	12 0.25 14	12 0.34 20	1.6 0.03 2	--	0.10	--	98 132	25	
29S/25E-10M 1 M 6-24-64 5050		18 0.90 45	0	25 1.09 54	1 0.03 1	0	73 1.20 60	18 0.37 19	14 0.39 20	1.7 0.03 2	--	0.10	--	114 146	45	

MINERAL ANALYSES OF GROUND WATER

SAN JOAQUIN DISTRICT

TABLE E-1

State Well Number			Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million				
Date Sampled Time	Agg. Coll.	Calcium Ca				Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	IDS Computed Evap 180°C	TOTAL hardness as CaCO ₃
29S/25E-10N 1 M 4-28-64 5050		74	7.8	561	63 3.14 63	3 0.25 5	35 1.52 31	2 0.05 1	0	72 1.18 24	59 1.23 25	84 2.37 49	5.2 0.08 2	--	0.10	--	287 378	170
-10N 1 M 6-24-64 5050		72	8.1	566	63 3.14 62	2 0.16 3	39 1.70 34	2 0.05 1	0	70 1.15 23	61 1.27 25	84 2.37 47	16.0 0.26 5	--	0.00	--	301 347	165
29S/25E-11K 1 M 6-23-64 5050		--	8.1	553	57 2.84 58	4 0.33 7	38 1.65 34	2 0.05 1	0	82 1.34 27	81 1.69 34	61 1.72 35	13.0 0.21 4	--	0.20	--	297 338	159
29S/25E-12M 3 M 4-10-64 5050		69	7.3	160	4 0.20 13	0	30 1.30 85	1 0.03 2	0	73 1.20 77	7 0.15 10	6 0.17 11	1.7 0.03 2	--	0.00	--	86 104	10
29S/25E-12M 4 M 4-10-64 5050		66	7.9	849	10 0.50 7	0	154 6.70 93	1 0.03 0	0	51 0.84 12	0	225 6.35 88	1.5 0.02	--	0.30	--	417 423	25
29S/25E-12N 1 M 6-23-64 5050		74	8.5	166	12 0.60 36	0	24 1.04 62	1 0.03 2	2 0.07 4	70 1.15 70	10 0.21 13	7 0.20 12	1.5 0.02 1	--	0.10	--	92 109	30
29S/25E-13R 1 M 7- 9-64 5050		74	8.5	267	23 1.15 47	0	29 1.26 52	1 0.03 1	2 0.07 3	65 1.07 45	23 0.48 20	25 0.71 30	4.1 0.07 3	--	0.20	--	139 165	58
29S/25E-32F 1 M 7- 8-64 5050		72	8.5	247	20 1.00 43	0	30 1.30 56	1 0.03 1	2 0.07 3	71 1.16 51	23 0.48 21	18 0.51 22	2.8 0.05 2	--	0.10	--	132 160	50
-32F 1 M 9-14-64 5050		71	8.2	257	--	--	--	--	0	81 1.33	--	18 0.51	--	--	--	--	--	257
29S/25E-35J 1 M 6-23-64 5050		72	8.2	250	28 1.40 54	2 0.16 6	23 1.00 39	1 0.03 1	0	109 1.79 71	18 0.37 15	10 0.28 11	5.2 0.08 3	--	0.10	--	141 161	78

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TABLE E-1
MINERAL ANALYSES OF GROUND WATER
SAN JOAQUIN DISTRICT

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boron B	Sili- co SiO ₂	IDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
29S/26E-9R 1 M 9-14-64 5050		72	8.3	575	--	--	--	--	0	91 1.49	--	49 1.38	--	--	--	--	153	
29S/26E-35K 1 M 9-14-64 5050		65	8.0	196	--	--	--	--	0	75 1.23	--	13 0.37	--	--	--	--	54	
29S/27E-21R M 2-7-64 5050		45	7.6	552	34 1.70 29	6 0.49 8	82 3.57 61	3 0.08 1	0	254 4.16 72	16 0.33 6	36 1.02 18	14.0 0.23 4	0.3	0.20	19	335 339	110
29S/27E-34N 1 M 4-8-64 5050		68	7.2	232	22 1.10 50	4 0.33 15	17 0.74 33	2 0.05 2	0	94 1.54 72	17 0.35 16	8 0.23 11	2.0 0.03 1	--	0.20	--	118 145	72
29S/27E-34N 2 M 4-8-64 5050		64	7.6	374	38 1.90 55	6 0.49 14	23 1.00 29	3 0.08 2	0	110 1.80 52	37 0.77 22	30 0.85 25	2.7 0.04 1	--	0.10	--	194 224	120
29S/27E-34N 3 M 4-8-64 5050		66	7.4	173	14 0.70 43	1 0.08 5	18 0.78 48	2 0.05 3	0	77 1.26 78	8 0.17 10	5 0.14 9	2.8 0.05 3	--	0.10	--	89 114	39
29S/27E-34N 4 M 4-8-64 5050		68	8.2	199	4 0.20 11	0	36 1.57 87	1 0.03 2	0	88 1.44 80	6 0.12 7	8 0.23 13	0.6 0.01 1	--	0.10	--	99 112	10
29S/28E-12E 1 M 12-8-63 5124		80	--	422	--	--	67 2.91	--	--	--	--	15 0.42	--	--	0.20	--	56	
-12E 1 M 9-15-64 5050		80	8.5	432	--	--	--	--	5 0.17	150 2.46	--	15 0.42	--	--	--	--	58	
30S/23E-1C 3 M 8-27-64 5050		70	7.6	641	--	--	--	--	0	34 0.56	--	150 4.23	--	--	--	--	29	

TABLE E-1

MINERAL ANALYSES OF GROUND WATER

SAN JOAQUIN DISTRICT

State Well Number			Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million					
Date Sampled Time	Agy. Coll.	Calcium Ca				Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180°C CoCO ₃	TOTAL hardness as CoCO ₃
30S/24E- 3E 1 M 6-24-64 5050		75	9.0	184	5 0.25 16	0	31 1.35 84	0	6 0.20 12	38 0.62 38	25 0.52 32	10 0.28 17	0.1	--	0.10	--	96 120	13
30S/24E- 4C 1 M 4- 9-64 5050		68	7.6	1350	168 8.38 57	21 1.73 12	102 4.43 30	3 0.08 1	0	282 4.62 31	440 9.16 61	44 1.24 8	0.8 0.01	--	0.60	--	918 992	506
30S/24E- 4C 4 M 7- 1-64 5050		78	8.2	506	32 1.60 35	1 0.08 2	66 2.87 63	0	0	90 1.48 31	120 2.50 53	25 0.71 15	0.8 0.01	--	0.20	--	289 311	84
30S/24E- 4C 5 M 4- 9-64 5050		69	7.1	416	35 1.75 44	4 0.33 8	43 1.87 47	1 0.03 1	0	94 1.54 39	92 1.92 49	16 0.45 12	0.2	--	0.30	--	238 272	104
30S/24E- 4C 6 M 4- 9-64 5050		69	8.1	142	2 0.10 7	2 0.16 11	28 1.22 82	0	0	62 1.02 72	9 0.19 13	7 0.20 14	0.2	--	0.20	--	79 119	13
30S/24E- 5L 2 M 6-24-64 5050		69	8.3	1000	94 4.69 45	13 1.07 10	103 4.48 43	3 0.08 1	0	274 4.49 43	235 4.89 46	40 1.13 11	0.4 0.01	--	0.60	--	624 651	288
30S/24E- 6E 1 M 6-24-64 5050		--	8.2	1120	54 2.69 25	2 0.16 2	178 7.74 73	1 0.03	0	133 2.18 21	227 4.73 45	129 3.64 35	0.3	--	0.40	--	657 676	143
30S/24E- 6H 1 M 6-24-64 5050		69	8.2	878	79 3.94 44	14 1.15 13	88 3.83 43	2 0.05 1	0	279 4.57 50	178 3.71 40	32 0.90 10	0.0	--	0.40	--	531 558	255
30S/24E- 8G 1 M 7- 2-64 5050		73	8.3	2410	158 7.88 33	27 2.22 9	319 13.87 58	2 0.05	3 0.10	259 4.25 18	444 9.24 38	375 10.58 44	0.2	--	0.90	--	1456 1560	505
30S/24E- 8P 1 M 8-28-64 5050		--	--	7160	--	--	--	--	--	--	--	--	--	3.10	--	--	--	--

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TABLE E-1
MINERAL ANALYSES OF GROUND WATER
SAN JOAQUIN DISTRICT

State Well Number		Temp. when Sampled °F	H _p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	IDS Computed Evap 180°C	TOTAL hardness as CaCO ₃
30S/24E-8P 1 M 8-28-64 5050		--	8.0	5120	208 10.38 21	39 3.21 6	824 35.83 72	3 0.08	0	104 1.70 3	686 14.28 28	1220 34.40 68	0.6 0.01	--	2.00	--	3034 3160	680
30S/24E-10P 2 M 6-24-64 5050		71	6.9	1250	123 6.14 48	32 2.63 20	93 4.04 31	4 0.10 1	0	88 1.44 11	463 9.64 73	72 2.03 15	10.0 0.16 1	--	0.40	--	841 929	439
30S/24E-11G 1 M 6-25-64 5050		73	8.5	310	17 0.85 31	0	43 1.87 69	0	3 0.10 4	56 0.92 33	58 1.21 43	20 0.56 20	0.1	--	0.00	--	169 186	43
30S/24E-11J 1 M 6-24-64 5050		74	8.8	164	6 0.30 18	0	31 1.35 82	0	4 0.13 8	64 1.05 63	13 0.27 16	7 0.20 12	0.4 0.01 1	--	0.10	--	93 108	15
30S/24E-14H 1 M 6-24-64 5050		76	8.1	806	96 4.79 60	3 0.25 3	68 2.96 37	1 0.03	0	125 2.05 25	262 5.45 67	24 0.68 8	0.0	--	0.20	--	516 525	252
-14H 1 M 8-27-64 5050		71	7.9	802	--	--	--	--	0	89 1.46	--	22 0.62	--	--	--	--	--	226
30S/24E-15D 1 M 6-24-64 5050		70	7.9	473	27 1.35 32	2 0.16 4	62 2.70 64	1 0.03 1	0	62 1.02 24	86 1.79 43	48 1.35 32	0.7 0.01	--	0.20	--	257 286	76
30S/25E-1H 1 M 6-25-64 5050		70	8.3	247	28 1.40 58	1 0.08 3	21 0.91 38	1 0.03 1	0	104 1.70 70	18 0.37 15	10 0.28 12	5.2 0.08 3	--	0.10	--	135 162	74
30S/25E-2A 1 M 6-23-64 5050		75	7.7	474	54 2.69 57	10 0.82 17	27 1.17 25	1 0.03 1	0	183 3.00 63	32 0.67 14	20 0.56 12	32.0 0.52 11	--	0.20	--	266 297	176
30S/25E-2K 1 M 6-23-64 5050		72	8.2	355	40 2.00 60	1 0.08 2	28 1.22 37	1 0.03 1	0	98 1.61 49	20 0.42 13	41 1.16 36	4.3 0.07 2	--	0.10	--	184 207	104

MINERAL ANALYSES OF GROUND WATER

SAN JOAQUIN DISTRICT

State Well Number			Temp when Sampled °F	H p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
						Calcium Co	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
30S/25E-7P 1 M 6-23-64 5050			70	8.0	485	55 2.74 58	1 0.08 2	43 1.87 40	1 0.03 1	0	151 2.47 53	62 1.29 28	30 0.85 18	4.1 0.07 1	--	0.20	--	271 285	141
30S/25E-8P 1 M 6-23-64 5050			72	8.5	213	17 0.85 40	0	30 1.30 60	0 0.07 3	2 0.07 3	86 1.41 66	17 0.35 16	10 0.28 13	1.8 0.03 1	--	0.10	--	120 136	43
30S/25E-9A 1 M 6-23-64 5050			74	8.3	310	28 1.40 45	1 0.08 3	36 1.57 51	1 0.03 1	0	117 1.92 64	29 0.60 20	14 0.39 13	6.0 0.10 3	--	0.10	--	173 184	74
30S/25E-9L 1 M 6-23-64 5050			--	8.2	407	36 1.80 46	3 0.25 6	42 1.83 47	1 0.03 1	0	137 2.25 58	45 0.94 24	21 0.59 15	5.5 0.09 2	--	0.20	--	221 245	103
30S/25E-10C 1 M 6-23-64 5050			73	8.4	377	38 1.90 52	2 0.16 4	36 1.57 43	1 0.03 1	4 0.13 4	136 2.23 64	31 0.65 19	11 0.31 9	12.0 0.19 5	--	0.20	--	202 229	103
8-27-64 5050 -10C 1 M			71	8.1	348	--	--	--	--	0	123 2.02	--	14 0.39	--	--	--	--	--	82
30S/25E-14H 1 M 7-7-64 5050			74	8.0	243	28 1.40 58	1 0.08 3	21 0.91 38	1 0.03 1	0	106 1.74 73	17 0.35 15	10 0.28 12	0.2	--	0.20	--	131 160	74
30S/25E-18A 1 M 6-23-64 5050			72	8.3	238	21 1.05 44	2 0.16 7	27 1.17 49	1 0.03 1	0	106 1.74 75	16 0.33 14	9 0.25 11	0.4 0.01	--	0.10	--	129 146	61
30S/25E-18C 1 M 6-23-64 5050			71	8.3	310	27 1.35 46	2 0.16 5	32 1.39 47	1 0.03 1	0	118 1.93 66	26 0.54 18	15 0.42 14	1.9 0.03 1	--	0.20	--	163 189	76
30S/25E-26A 1 M 7-7-64 5050			70	8.2	262	19 0.95 37	1 0.08 3	36 1.57 60	0	0	114 1.87 73	18 0.37 15	10 0.28 11	1.6 0.03 1	--	0.20	--	142 170	52

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TABLE E-1
MINERAL ANALYSES OF GROUND WATER
SAN JOAQUIN DISTRICT

State Well Number			Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					
Date Sampled Time	Agg. Call.	Calcium Ca				Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180°C	TOTAL hardness as CaCO ₃	
30S/25E-31P 1 M 6-25-64 5050			76	8.3	321	25 1.25 40	1 0.08 3	40 1.74 56	1 0.03 1	0	120 1.97 65	30 0.62 20	16 0.45 15	0.4 0.01	--	0.10	--	173 191	67
30S/26E-22P 1 M 4- 8-64 5050			70	8.0	171	10 0.50 26	1 0.08 4	30 1.30 68	1 0.03 2	0	86 1.41 40	10 0.21 6	68 1.92 54	1.1 0.02 1	--	0.10	--	163 107	29
30S/26E-22P 2 M 4- 8-64 5050			--	8.3	186	4 0.20 10	3 0.25 12	36 1.57 77	1 0.03 1	0	106 1.74 82	8 0.17 8	6 0.17 8	2.9 0.05 2	--	0.00	--	113 134	23
30S/26E-22P 3 M 4- 8-64 5050			--	8.3	214	2 0.10 5	1 0.08 4	41 1.78 91	0	89 1.46 72	13 0.27 13	10 0.28 14	1.6 0.03 1	--	0.10	--	112 144	9	
30S/27E-19L 1 M 8-27-64 5050			67	8.3	318	--	--	--	--	0	126 2.07	--	11 0.31	--	--	--	--	--	91
30S/28E-10N 1 M 4- 8-64 5050			68	8.2	1150	63 3.14 26	23 1.89 16	154 6.70 56	6 0.15 1	0	418 6.85 58	100 2.08 18	80 2.26 19	43.0 0.69 6	--	0.80	--	675 694	252
30S/28E-10N 2 M 4- 8-64 5050			68	7.7	243	16 0.80 33	2 0.16 7	31 1.35 56	3 0.08 3	0	110 1.80 76	15 0.31 13	9 0.25 11	0.9 0.01	--	0.10	--	131 154	48
30S/28E-10N 3 M 4- 8-64 5050			68	8.0	394	22 1.10 28	3 0.25 6	57 2.48 63	4 0.10 3	0	153 2.51 66	38 0.79 21	17 0.48 13	1.7 0.03 1	--	0.10	--	218 231	68
30S/28E-10N 4 M 4- 8-64 5050			68	8.3	215	9 0.45 22	0 0.25 22	36 1.57 76	2 0.05 2	0	70 1.15 58	17 0.35 18	16 0.45 23	1.3 0.02 1	--	0.10	--	116 125	23
30S/28E-11R 1 M 8-28-64 5050			76	8.4	542	--	--	--	--	5 0.17	197 3.23	--	32 0.90	--	--	--	--	--	157

MINERAL ANALYSES OF GROUND WATER

SAN JOAQUIN DISTRICT

State Well Number		Temp. when Sampled °F	H _p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million					
Date Sampled Time	Agy. Coll.				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180° C
30S/28E-25A 1 M 8-28-64 5050		78	8.1	566	--	--	--	--	--	0	220 3.61	--	35 0.99	--	--	--	165
31S/24E-28B 1 M 8-26-64 5050		78	8.1	6030	--	--	--	--	--	0	91 1.49	--	886 24.99	--	--	--	1810
31S/25E-27F 1 M 4- 9-64 5050		64	7.6	2330	362 18.06 64	26 2.14 8	179 7.78 28	6 0.15 1	0	71 1.16 4	1260 26.23 93	22 0.62 2	3.2 0.05	--	0.90	--	1894 2070 1011
31S/25E-27F 2 M 4- 9-64 5050		63	7.6	2080	245 12.23 54	4 0.33 1	228 9.91 44	3 0.08	0	62 1.02 4	1060 22.07 94	11 0.31 1	2.6 0.04	--	0.10	--	1584 1680 629
31S/25E-27F 3 M 4- 9-64 5050		64	7.2	898	50 2.50 29	1 0.08 1	136 5.91 69	2 0.05 1	0	74 1.21 14	330 6.87 80	15 0.42 5	3.0 0.05 1	--	1.00	--	574 609 129
31S/25E-27F 4 M 4- 9-64 5050		64	7.7	898	22 1.10 14	0	157 6.83 86	1 0.03	0	99 1.62 20	254 5.29 65	44 1.24 15	3.0 0.05 1	--	1.00	--	531 571 55
31S/26E-32C 1 M 8-26-64 5050		79	8.3	496	--	--	--	--	0	123 2.02	--	8 0.23	--	--	--	--	61
31S/27E-14F 1 M 8-27-64 5050		67	8.4	372	--	--	--	--	4 0.13	121 1.98	--	17 0.48	--	--	--	--	92
31S/30E-20B 1 M 7-17-64 5645		--	11.1	833	24 1.20 19	2 0.16 3	116 5.04 79	--	47 3.30 49	0	23 0.48 7	97 2.74 41	14.3 0.23 3	--	0.64	--	376 353 68
31S/30E-20B 2 M 7-14-64 5645		--	8.5	435	3 0.15 4	5 0.41 11	73 3.17 85	--	13 0.43 11	127 2.08 55	6 0.12 3	40 1.13 30	0.1	0.38	--	203 28	

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TABLE E-1
MINERAL ANALYSES OF GROUND WATER
SAN JOAQUIN DISTRICT

State Well Number			Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million				
Date Sampled Time	Agy. Coll.	Calcium Ca				Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	IDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
31S/30E-20B 3 M 7-20-64 5645		--	8.3	416	3 0.15 4	5 0.41 11	76 3.30 85	--	12 0.40 10	121 1.98 51	4 0.08 2	50 1.41 36	0.1	--	0.34	--	210 211	28
31S/30E-29M 1 M 8- 6-64 5645		--	7.6	357	30 1.50 45	9 0.74 22	26 1.13 34	--	0	171 2.80 79	6 0.12 3	16 0.45 13	11.5 0.19 5	--	0.10	--	183 183	112
31S/30E-30C 1 M 8-28-64 5050		70	8.0	471	--	--	--	--	0	146 2.39	--	28 0.79	--	--	--	--	--	139
32S/25E-34G 2 M 8-27-64 5050		84	7.7	3420	--	--	--	--	0	137 2.25	--	49 1.38	--	--	--	--	--	1430
32S/27E- 6D 3 M 9-15-64 5050		73	8.1	415	--	--	--	--	0	127 2.08	--	10 0.28	--	--	--	--	--	34
32S/27E-16R 2 M 9-15-64 5050		68	8.5	860	--	--	--	--	8 0.27	192 3.15	--	25 0.71	--	--	--	--	--	248
0-15-64 5050	-16R 2 M 9-15-64 5050	68	8.4	977	--	--	--	--	8 0.27	208 3.41	--	27 0.76	--	--	--	--	--	303
32S/28E-12F 1 M 8-28-64 5050		--	8.5	375	--	--	--	--	2 0.07	131 2.15	--	13 0.37	--	--	--	--	--	74
32S/28E-30D 1 M 4- 7-64 5050		70	7.9	646	39 1.95 31	10 0.82 13	81 3.52 55	4 0.10 2	0	176 2.88 46	137 2.85 45	20 0.56 9	0.0	--	0.60	--	378 400	139
32S/28E-30D 2 M 4- 7-64 5050		--	8.7	445	14 0.70 17	4 0.33 8	70 3.04 73	4 0.10 2	12 0.40 10	113 1.85 45	69 1.44 35	16 0.45 11	0.0	--	0.40	--	245 258	52

MINERAL ANALYSES OF GROUND WATER

SAN JOAQUIN DISTRICT

State Well Number		Temp. when Sampled °F	H p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chloride Cl	Ni- trate NO ₃	Fluoride F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
325/28E-30D 3 M 4- 7-64 5050		70	7.9	490	19 0.95 20	8 0.66 14	70 3.04 64	4 0.10 2	0	154 2.52 54	81 1.69 37	15 0.42 9	0.0	--	0.50	--	273 292	81
325/29E-19H 2 M 4- 7-64 5050		70	8.0	741	69 3.44 46	19 1.56 21	55 2.39 32	3 0.08 1	0	197 3.23 44	92 1.92 26	76 2.14 29	3.4 0.05 1	--	0.20	--	414 438	250
325/29E-19H 3 M 4- 7-64 5050		70	7.9	333	27 1.35 40	6 0.49 15	33 1.43 43	3 0.08 2	0	155 2.54 78	21 0.44 14	8 0.23 7	1.8 0.03 1	--	0.20	--	176 199	92
325/29F-35M 1 M 8-28-64 5050		70	7.9	1390	--	--	101 4.39	--	--	--	--	130 3.67	227.0 3.66	--	--	--	--	414
10N/19W- 8A 1 S 11- 7-63 5050		--	8.3	1190	59 2.94 24	46 3.78 30	127 5.52 44	10 0.26 2	0	328 5.38 43	294 6.12 49	32 0.90 7	3.1 0.05	--	1.30	--	734 775	336
11N/18W-14M 1 S 8-28-64 5050		--	8.2	486	--	--	--	--	0	126 2.07	--	24 0.68	--	--	--	--	--	181
11N/19W-25F 1 S 8-28-64 5050		--	8.7	561	--	--	--	--	12 0.40	231 3.79	--	19 0.54	--	--	--	--	--	216
11N/20W- 8R 1 S 8-28-64 5050		78	8.1	1570	--	--	--	--	0	78 1.28	--	54 1.52	--	--	--	--	--	517
11N/20W-25K 1 S 8-28-64 5050		--	8.1	2320	--	--	--	--	0	87 1.43	--	63 1.78	--	--	--	--	--	859
11N/21W- 5M 1 S 8-27-64 5050		78	7.9	1480	--	--	--	--	0	117 1.92	--	23 0.65	--	--	--	--	--	559

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TABLE E-1
MINERAL ANALYSES OF GROUND WATER
SAN JOAQUIN DISTRICT

State Well Number		Temp. when Sampled °F	H _p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in							milligrams per liter equivalents per million percent reactance value					Mineral constituents in parts per million				
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃			
11N/21W-11N 1 S 8-27-64 5050		83	8.4	951	--	--	--	--	2 0.07	105 1.72	--	19 0.54	--	--	--	--	199				
11N/21W-110 1 S 12-6-63 5124		--	7.9	1040	114 5.69 44	27 2.22 17	112 4.87 38	5 0.13 1	0	98 1.61 13	498 10.37 82	23 0.65 5	0.0	0.2	0.40	30	858 910 396				
--110 1 S 8-27-64 5050		87	8.1	1260	--	--	--	--	0	96 1.57	--	26 0.73	--	--	--	--	408				
11N/22W-8G 1 S 8-27-64 5050		83	8.0	3210	--	--	--	--	0	82 1.34	--	151 4.26	--	--	--	--	1290				
12N/19W-33R 1 S 8-28-64 5050		74	8.5	359	--	--	--	--	5 0.17	153 2.51	--	7 0.20	--	--	--	--	95				
12N/21W-33N 1 S 8-27-64 5050		79	8.1	1540	--	--	--	--	0	76 1.25	--	28 0.79	--	--	--	--	587				
12N/22W-25N 1 S 8-27-64 5050		80	8.2	1540	--	--	--	--	0	99 1.62	--	18 0.51	--	--	--	--	556				

MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA
PERCHED AQUIFER

State Well Number			Temp. when Sampled °F	H p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million					TOTAL hardness as CaCO ₃
Date Sampled Time	Agg. Coll.	Calcium Co				Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180°C	
11S/14E-3K 1 M 10- 8-64 5000		--	--	--	--	0	174 2.85	--	496 13.99	--	--	--	--	--	--	685		
11S/14E-6G 1 M 10- 9-64 5000		--	--	--	--	0	132 2.16	--	817 23.04	--	--	--	--	--	--	896		
11S/14E-21N 2 M 10- 7-64 5000		--	--	--	--	0	60 0.98	--	2560 72.19	--	--	--	--	--	--	2270		
11S/14E-33P 1 M 9- 4-64 5000		408 20.36 37	88 7.24 13	610 26.52 49	0.20	0	164 2.69 5	135 2.81 5	1720 48.50 90	4.6 0.07	0.3	0.10	68	3470	1381	243		
11S/15E-35P 1 M 9-29-64 5000		61 3.04 38	22 1.81 23	70 3.04 38	0.08	4 0.13 2	376 6.16 76	19 0.40 5	49 1.38 17	2.5 0.04	0.2	0.10	67	462	243	762		
12S/14E-3N 1 M 9-23-64 5000		239 11.93 20	40 3.29 6	1000 43.48 74	0.10	0	344 5.64 10	211 4.39 8	1660 47.38 82	7.7 0.12	0.0	0.10	61	3412	762	1060		
12S/14E-4J 2 M 10- 7-64 5000		--	--	--	--	0	173 2.84	--	1520 42.86	--	--	--	--	--	--	1060		
12S/14E-12N 1 M 10- 8-64 5000		113 5.64 28	34 2.80 14	260 11.30 57	0.05	0	296 4.85 25	84 1.75 9	452 12.75 66	1.5 0.02	0.0	0.10	54	1146	422	422		
12S/14E-26G 1 M 10-23-64 5000		59 2.94 23	8 0.66 5	209 9.09 71	0.05	0	161 2.64 20	107 2.23 17	288 8.12 62	0.8 0.01	--	0.20	--	753 810	180	180		
12S/15E-27L 1 M 10-26-64 5000		--	--	--	--	31 1.03	273 4.47	--	38 1.07	--	--	--	--	--	85	85		

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TABLE E-2
PERCHED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled ° F	H p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					
Date Sampled Time	Agg. Call.				Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carban- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
13S/15E-18R 1 M 10-23-64 5000		65	8.2	514	18 0.90 18	4 0.33 6	87 3.78 74	3 0.08 2	0	187 3.06 60	33 0.69 14	46 1.30 26	0.6 0.01	--	0.00	--	284 310	62

TABLE 2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlor- ide Cl	Ni- trate NO ₃	Fluor- ide F	Baron 8	Sili- ca SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
9S/16E-30B 3 M 7-26-57 5050		70	7.1	202	17 0.85 45	4 0.33 17	15 0.65 34	3 0.08 4	0	79 1.29 69	3 0.06 3	17 0.48 26	1.8 0.03 2	0.0	0.00	62	162	59
8-30B 3 M 7-58 5050		72	8.0	204	18 0.90 46	4 0.33 17	15 0.65 33	3 0.08 4	0	84 1.38 70	2 0.04 2	18 0.51 26	2.8 0.05 3	0.0	0.03	70	174	62
7-21-59 5128		--	7.9	203	19 0.95 47	3 0.25 12	17 0.74 37	3 0.08 4	0	86 1.41 70	1 0.02 1	20 0.56 28	2.0 0.03 1	0.1	0.00	77	184	60
7-20-60 5128		73	7.6	216	16 0.80 38	5 0.41 19	19 0.83 39	3 0.08 4	0	84 1.38 64	8 0.17 8	20 0.56 26	2.0 0.03 1	0.0	0.11	48	162	61
7-25-61 5128		72	8.2	198	17 0.85 43	4 0.33 17	16 0.70 36	3 0.08 4	0	81 1.33 68	3 0.06 3	18 0.51 26	3.0 0.05 3	0.1	0.03	69	173	59
6-19-62 5050		71	7.9	197	14 0.70 36	6 0.49 25	16 0.70 36	3 0.08 4	0	80 1.31 70	1 0.02 1	18 0.51 27	1.8 0.03 2	0.1	0.06	70	169	60
8-30B 3 M 7-63 5050		74	--	207	--	--	17 0.74	--	--	--	--	18 0.51	--	--	0.00	--	--	61
5-28-64 5050		--	7.9	201	--	--	16 0.70	--	--	--	--	17 0.48	--	--	0.00	--	--	61
10S/14E-8B 2 M 1-5-53 5001		--	--	306	4 0.20	1 0.08	62 2.70	1 0.03	4 0.13	135 2.21	5 0.10	21 0.59	--	--	--	--	220	14
7-24-57 5050		66	7.9	530	58 2.89 51	12 0.99 17	39 1.70 30	4 0.10 2	0	261 4.28 77	6 0.12 2	32 0.90 16	14.0 0.23 4	0.2	0.00	80	374	194

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value										Mineral constituents in parts per million				
Date Sampled Time	Agg. Coll.				Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chloride Cl	Ni- trate NO ₃	Fluoride F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180° C	TOTAL hardness at CaCO ₃	
10S/14E-8B 2 M 8-7-58 5050		67	7.8	491	46 2.30 47	11 0.90 18	37 1.61 33	4 0.10 2	0	224 3.67 75	6 0.12 2	30 0.85 17	15.0 0.24 5	0.1	0.00	68	327	160	
- 8B 2 M 7-21-59 5128		67	7.6	532	60 2.99 52	11 0.90 16	40 1.74 30	4 0.10 2	0	264 4.33 78	5 0.10 2	32 0.90 16	14.0 0.23 4	0.0	0.00	69	365	195	
- 8B 2 M 7-26-60 5128		68	7.6	426	30 1.50 36	12 0.99 24	37 1.61 38	4 0.10 2	0	174 2.85 69	4 0.08 2	37 1.04 25	12.0 0.19 5	0.0	0.11	50	272	125	
- 8B 2 M 7-25-61 5128		72	8.0	440	37 1.85 42	10 0.82 19	38 1.65 37	4 0.10 2	0	190 3.11 72	6 0.12 3	31 0.87 20	15.0 0.24 6	0.1	0.06	66	301	134	
- 8B 2 M 6-19-62 5050		69	7.7	448	36 1.80 42	10 0.82 19	36 1.57 37	4 0.10 2	0	187 3.06 71	5 0.10 2	33 0.93 21	15.0 0.24 6	0.1	0.07	68	299	131	
- 8B 2 M 8-15-63 5050		67	--	533	--	--	38 1.65	--	--	--	--	35 0.99	--	--	0.10	--	--	176	
- 8B 2 M 5-28-64 5050		67	7.7	594	--	--	40 1.74	--	--	--	--	35 0.99	--	--	0.00	--	--	217	
10S/14E-13A 1 M 10-22-64 5000		--	8.3	414	--	--	--	--	0	138 2.38	--	43 1.40	--	--	--	--	--	136	
10S/14E-20N 1 M 10-7-64 5000		--	8.3	464	--	--	--	--	0	139 2.37	--	56 1.35	--	--	--	--	--	119	
10S/14E-24B 1 M 7-24-57 5050		68	8.1	658	68 3.39 54	13 1.07 17	39 1.70 27	4 0.10 2	0	156 2.56 41	6 0.12 2	121 3.41 55	9.3 0.15 2	0.0	0.00	85	422	223	

SEMI-CONFINED AQUIFER MINERAL ANALYSES OF GROUND WATER FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boran B	Sili- ca SiO ₂	TDS Computed Evap 180°C	TOTAL hardness as CaCO ₃
10S/14E-24B 1 M 8- 7-58 5128		68	7.7	707	71 3.54 55	13 1.07 17	40 1.74 27	5 0.13 2	0	165 2.70 42	6 0.12 2	120 3.38 53	10.0 0.16 3	0.1	0.00	68	414	231
-24B 1 M 7-21-59 5128		68	7.5	746	78 3.89 54	15 1.23 17	44 1.91 27	6 0.15 2	0	181 2.97 42	7 0.15 2	134 3.78 54	9.6 0.15 2	0.1	0.00	71	454	256
-24B 1 M 7-20-60 5128		72	7.5	748	65 3.24 49	16 1.32 20	46 2.00 30	4 0.10 2	0	125 2.05 31	8 0.17 3	153 4.31 65	7.0 0.11 2	0.0	0.22	49	410	228
-24B 1 M 8-12-62 5128		70	--	802	--	--	50 2.17	4 0.10	--	--	--	136 3.84	--	--	0.04	--	--	261
10S/14E-26H 1 M 10-13-64 5000		--	8.2	550	--	--	--	--	0	114 1.86	--	94 2.51	--	--	--	--	--	173
10S/14E-33M 1 M 10- 9-64 5000		68	8.3	899	--	--	--	--	0	98 1.21	--	219 7.76	--	--	--	--	--	300
10S/14E-35K 1 M 10- 8-64 5000		--	8.4	589	--	--	--	--	3 0.10	105 1.69	--	113 3.17	--	--	--	--	--	151
10S/15E- 2J 1 M 9-28-61 5050		--	--	390	34 2.19 62	8 0.08 2	27 1.18 33	2 0.11 3	0	106 1.77 55	2 0.04 1	55 1.27 40	9.4 0.11 3	0.2	0.08	54	243	661
10S/15E-31A 1 M 7-24-57 5050		70	7.9	353	32 1.60 46	8 0.66 19	26 1.13 33	3 0.08 2	0	127 2.08 60	4 0.08 2	43 1.21 35	4.3 0.07 2	0.3	0.00	78	261	113
-31A 1 M 8- 7-58 5050		70	7.7	429	38 1.90 48	9 0.74 19	28 1.22 31	4 0.10 3	0	139 2.28 58	4 0.08 2	54 1.52 38	5.0 0.08 2	0.2	0.03	73	284	132

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	H P	Specific conductance (micro-mhas at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
					Calcium Co	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	IDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
10S/15E-31A 1 M 7-21-59 5128		70	8.0	496	48 2.40 51	11 0.90 19	31 1.35 28	4 0.10 2	0	155 2.54 53	6 0.12 2	73 2.06 43	5.8 0.09 2	0.1	0.00	75	350	165
-31A 1 M 7-25-60 5128		72	7.8	625	59 2.94 50	16 1.32 22	36 1.57 27	3 0.08 1	0	173 2.84 48	6 0.12 2	101 2.85 49	4.0 0.06 1	0.0	0.22	51	361	213
-31A 1 M 7-25-61 5128		72	7.4	662	70 3.49 54	15 1.23 19	38 1.65 25	5 0.13 2	0	187 3.06 47	8 0.17 3	110 3.10 48	7.3 0.12 2	0.1	0.05	72	417	236
-31A 1 M 6-21-62 5128		69	--	707	--	--	41 1.78	5 0.13	--	--	--	111 3.13	--	--	0.08	--	--	249
-31A 1 M 8-15-63 5050		68	--	772	--	--	43 1.87	--	--	--	--	120 3.38	--	--	0.10	--	--	268
10S/16E- 6J80 M 9-27-61 5050		--	8.0	268	26 1.30 48	7 0.58 21	18 0.78 29	2 0.05 2	0	116 1.90 73	2 0.04 2	20 0.56 22	5.9 0.10 4	0.2	0.07	56	194	94
10S/17E- 4J 1 M 8-10-60 5050		--	8.1	418	--	--	21 0.91	--	0	187 3.06	--	26 0.73	--	--	--	--	--	170
10S/18E- 8J80 M 7- 8-59 5050		--	7.7	669	--	--	--	--	0	230 3.77	--	44 1.24	--	--	--	--	--	242
10S/18E- 8L 1 M 7- 8-59 5050		--	8.1	439	--	--	--	--	0	194 3.18	--	21 0.59	--	--	--	--	--	126
10S/18E-20M 1 M 8-10-60 5050		--	7.8	295	--	--	20 0.87	--	0	68 1.11	--	25 0.71	--	--	--	--	--	90

SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180°C	TOTAL hardness as CaCO ₃
10S/19E-16D80 M 7- 8-59 5050		--	8.2	442	--	--	--	--	0	198 3.25	--	16 0.45	--	--	--	--	--	161
11S/12E-13J 1 M 7- 3-57 5641		--	7.1	1870	98 4.89 27	50 4.11 23	200 8.70 49	5 0.13 1	0	188 3.08 17	108 2.25 12	460 12.97 71	1.3 0.02	0.1	0.28	31	1046	450
8-16-58 5641 -13J 1 M		--	8.1	1570	83 4.14 28	38 3.13 21	168 7.30 49	7 0.18 1	0	131 2.15 15	87 1.81 12	381 10.74 73	3.0 0.05	0.0	0.30	21	853 1004	364
8- 3-59 5641 -13J 1 M		--	7.3	1900	100 4.99 27	55 4.52 24	203 8.83 48	5 0.13 1	0	197 3.23 18	117 2.44 13	443 12.49 69	1.0 0.02	0.2	0.35	30	1051	476
7-23-60 5641 -13J 1 M		--	7.7	1395	77 3.84 30	39 3.21 25	128 5.57 43	14 0.36 3	0	223 3.65 28	54 1.12 9	290 8.18 63	1.0 0.02	0.0	0.22	23	736	353
7- 7-61 5641 -13J 1 M		--	7.1	1810	93 4.64 26	54 4.44 25	195 8.48 48	4 0.10 1	0	190 3.11 17	116 2.42 14	435 12.27 69	1.5 0.02	0.2	0.34	29	1021	454
7-23-63 5641 -13J 1 M		--	--	1770	--	--	192 8.35	--	--	--	--	407 11.48	--	--	0.30	--	--	417
11S/13E-17L 1 M 7- 3-57 5641		--	7.3	1190	36 1.80 16	21 1.73 16	173 7.52 67	4 0.10 1	0	171 2.80 25	75 1.56 14	248 6.99 62	0.7 0.01	0.0	0.51	33	675	177
8- 3-59 5641 -17L 1 M		--	8.1	1240	40 2.00 17	20 1.64 14	181 7.87 68	3 0.08 1	0	183 3.00 26	79 1.64 14	250 7.05 60	0.7 0.01	0.2	0.60	30	694	182
7-23-60 5641 -17L 1 M		--	8.1	1326	41 2.05 17	23 1.89 15	189 8.22 67	3 0.08 1	0	180 2.95 24	81 1.69 14	275 7.76 63	0.0	0.0	0.59	22	723	197

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	H _p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per millian percent reactance value						Mineral constituents in parts per millian					TOTAL hardness at CaCO ₃		
Date Sampled Time	Agv. Coll.				Calcium Ca	Magne-sium Mg	Sodium Na	Potas-sium K	Carbon-ate CO ₃	Bicar-bonate HCO ₃	Sulfate SO ₄	Chla-ride Cl	Ni-trate NO ₃	Flua-ride F	Boron B		Sili-ca SiO ₂	TDS Computed Evap 180° C
11S/13E-17L 1 M 7- 7-61 5641		--	8.3	1290	42 2.10 17	24 1.97 16	188 8.17 66	3 0.08 1	0	181 2.97 24	86 1.79 15	262 7.39 61	1.0 0.02	0.1	0.60	30	726	204
-17L 1 M 7- 6-62 5641		--	--	1310	--	--	192 8.35	3 0.08	--	--	--	272 7.67	--	--	--	--		198
-17L 1 M 7-23-63 5641		--	--	1360	--	--	195 8.48	--	--	--	--	275 7.76	--	--	0.60	--		205
-17L 1 M 4-15-64 5050		67	7.9	1330	--	--	186 8.09	--	--	--	--	267 7.53	--	--	0.60	--		197
-17L 1 M 7-13-64 5641		--	8.2	1330	--	--	188 8.17	--	--	--	--	272 7.67	--	--	0.60	--		199
11S/13E-36B 1 M 7- 3-57 5641		--	7.7	1010	30 1.50 16	7 0.58 6	169 7.35 77	3 0.08 1	0	137 2.25 24	90 1.87 20	186 5.25 56	0.1	0.0	0.29	52	605	104
-36B 1 M 8- 3-59 5641		--	8.0	1060	34 1.70 17	6 0.49 5	181 7.87 78	2 0.05	0	147 2.41 24	92 1.92 19	204 5.75 57	0.4 0.01	0.2	0.30	51	643	110
-36B 1 M 7-23-60 5641		--	8.0	1160	37 1.85 17	8 0.66 6	186 8.09 76	2 0.05	0	146 2.39 23	94 1.96 18	222 6.26 59	0.0	0.0	0.51	37	658	126
-36B 1 M 7- 6-62 5641		--	--	1190	--	--	192 8.35	2 0.05	--	--	--	235 6.63	--	--	0.30	--		129
-36B 1 M 7-23-63 5641		--	--	1240	--	--	195 8.48	--	--	--	--	241 6.80	--	--	0.40	--		134

SEMI-CONFINED AQUIFER

MINERAL ANALYSES OF GROUND WATER

FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
11S/14E-5B 1 M 8-7-58 5050		69	7.9	267	21 1.05 42	5 0.41 16	22 0.96 38	0.08 3	3 0	91 1.49 62	2 0.04 2	27 0.76 32	7.4 0.12 5	0.1	0.00	74	206	73
-5B 1 M 8-12-59 5050		--	7.4	313	28 1.40 47	6 0.49 16	24 1.04 35	0.08 3	3 0	101 1.66 55	3 0.06 2	44 1.24 41	2.9 0.05 2	0.0	0.00	77	238	95
-5B 1 M 7-26-60 5128		68	7.8	422	38 1.90 50	7 0.58 15	29 1.26 33	2 0.05 1	0 0	96 1.57 41	4 0.08 2	76 2.14 56	2.0 0.03 1	0.0	0.00	53	258	124
-5B 1 M 7-25-61 5128		72	8.2	506	50 2.50 55	9 0.74 16	29 1.26 28	3 0.08 2	0 0	93 1.52 34	6 0.12 3	99 2.79 63	1.7 0.03 1	0.1	0.04	75	319	162
-5B 1 M 6-21-62 5641		68	--	606	--	--	33 1.43	4 0.10	--	--	--	123 3.47	--	--	0.05	--	--	198
-5B 1 M 8-15-63 5050		68	8.0	610	69 3.44 56	12 0.99 16	36 1.57 26	4 0.10 2	0 0	110 1.80 29	17 0.35 6	142 4.00 65	3.2 0.05 1	0.1	0.10	57	394 412	222
11S/14E-9G 1 M 7-25-57 5050		68	7.2	562	59 3.26 58	10 0.82 15	33 1.43 25	4 0.13 2	0 0	154 2.24 46	8 0.16 3	90 2.38 49	2.5 0.08 2	0.0	0.00	62	347	411
11S/14E-16A 1 M 8-7-58 5128		70	7.7	340	28 1.40 45	6 0.49 16	27 1.17 37	3 0.08 3	0 0	119 1.95 62	5 0.10 3	32 0.90 29	11.0 0.18 6	0.1	0.00	76	247	95
-16A 1 M 7-21-59 5128		70	7.5	420	38 1.90 47	8 0.66 16	32 1.39 34	4 0.10 2	0 0	122 2.00 50	8 0.17 4	58 1.64 41	11.0 0.18 5	0.0	0.00	78	297	128
-16A 1 M 7-26-60 5128		70	7.8	507	46 2.30 49	10 0.82 18	33 1.43 31	4 0.10 2	0 0	126 2.07 45	7 0.15 3	80 2.26 49	6.0 0.10 2	0.0	0.11	53	301	156

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million					TOTAL hardness as CaCO ₃	
Date Sampled Time	Agy. Coll.				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂		TDS Computed Evap 180° C
11S/14E-16A 1 M 7-25-61 5128		72	8.3	539	52 2.59 50	12 0.99 19	34 1.48 29	4 0.10 2	0	126 2.07 41	12 0.25 5	91 2.57 51	8.3 0.13 3	0.2	0.05	79	354	179
-16A 1 M 6-21-62 5050		69	8.1	590	--	--	36 1.57	4 0.10	--	--	--	104 2.93	--	--	0.10	--	--	196
-16A 1 M 9-11-63 5050		70	8.2	655	54 2.69 43	21 1.73 28	40 1.74 28	4 0.10 2	0	137 2.25 37	6 0.12 2	126 3.55 58	11.0 0.18 3	0.1	0.00	55	384 402	221
11S/14E-24R 1 M 10- 7-64 5000		69	8.3	428	--	--	--	--	0	146 2.39	--	46 1.30	--	--	--	--	--	136
11S/14E-25R 1 M 10- 7-64 5000		69	8.6	347	--	--	--	--	8 0.27	136 2.23	--	22 0.62	--	--	--	--	--	102
11S/14E-28B 1 M 10- 7-64 5000		69	8.2	1010	--	--	--	--	0	75 1.32	--	256 8.59	--	--	--	--	--	288
11S/15E- 6F 1 M 10- 8-64 5000		--	8.6	616	--	--	--	--	8 0.27	172 2.82	--	84 2.57	--	--	--	--	--	146
11S/14E-32B 1 M 10- 7-64 5050		--	7.8	925	84 4.19	22 1.81	66 2.87	1 0.03	0	234 3.84	58 1.21	141 3.98	7.6	--	0.10	--	559	300
11S/15E-23L 1 M 7-23-57 5050		68	7.1	339	32 1.60 45	8 0.66 19	28 1.22 34	3 0.08 2	0	169 2.77 80	4 0.08 2	18 0.51 15	6.2 0.10 3	0.2	0.02	67	249	113
-23L 1 M 8- 7-58 5050		69	7.8	368	31 1.55 42	10 0.82 22	28 1.22 33	3 0.08 2	0	180 2.95 81	4 0.08 2	18 0.51 14	7.3 0.12 3	0.2	0.00	70	260	119

TABLE 1-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number			Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					
						Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlor- ide Cl	Ni- trate NO ₃	Fluor- ide F	Boron B	Sili- ca SiO ₂	IDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
11S/15E-23L 1 M 7-21-59 5128			68	8.2	365	33 1.65 42	10 0.82 21	31 1.35 35	0.08 2	0	171 2.80 69	5 0.10 2	38 1.07 26	5.6 0.09 2	0.1	0.00	70	280	124
-23L 1 M 7-26-60 5128			70	7.3	358	36 1.80 45	10 0.82 21	30 1.30 33	3 0.08 2	0	190 3.11 78	6 0.12 3	24 0.68 17	4.0 0.06 2	0.0	0.97	48	255	131
-23L 1 M 7-25-61 5128			73	8.3	365	33 1.65 43	10 0.82 21	30 1.30 34	3 0.08 2	0	183 3.00 78	6 0.12 3	21 0.59 15	7.7 0.12 3	0.2	0.07	71	272	124
-23L 1 M 8-12-62 5128			68	--	407	--	--	29 1.26	3 0.08	--	--	--	21 0.59	--	--	0.08	--	--	140
-23L 1 M 8-26-63 5050			69	--	422	--	--	31 1.35	--	--	--	--	22 0.62	--	--	0.00	--	--	144
11S/15E-29H 1 M 7-24-57 5050			68	7.7	385	37 1.85 43	11 0.90 21	34 1.48 34	3 0.08 2	0	188 3.08 71	8 0.17 4	34 0.96 22	6.0 0.10 2	0.2	0.01	67	293	138
-29H 1 M 8- 7-58 5050			69	8.3	432	37 1.85 43	11 0.90 21	35 1.52 35	3 0.08 2	4 0.13 3	184 3.02 70	7 0.15 3	33 0.93 22	4.2 0.07 2	0.2	0.00	74	299	136
-29H 1 M 7-21-59 5128			72	8.0	424	48 2.40 54	5 0.41 9	35 1.52 34	3 0.08 2	0	193 3.16 72	7 0.15 3	36 1.02 23	2.7 0.04 1	0.1	0.10	78	310	141
-29H 1 M 7-26-60 5128			70	7.8	418	34 1.70 40	11 0.90 21	35 1.52 36	3 0.08 2	0	176 2.88 70	7 0.15 4	38 1.07 26	2.0 0.03 1	0.0	0.00	53	270	130
-29H 1 M 7-25-61 5128			70	8.3	426	39 1.95 45	10 0.82 19	34 1.48 34	3 0.08 2	0	188 3.08 71	8 0.17 4	36 1.02 24	3.6 0.06 1	0.2	0.06	79	305	139

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhas at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
11S/15E-29H 1 M 6-21-62 5641		--	--	436	--	--	35 1.52	3 0.08	--	--	--	36 1.02	--	--	0.07	--	--	142
-29H 1 M 8-15-63 5050		68	--	460	--	--	35 1.52	--	--	--	--	40 1.13	--	--	0.10	--	--	148
11S/17E-25B 1 M 7-22-57 5050		70	6.9	207	15 0.75 38	4 0.33 17	19 0.83 42	3 0.08 4	0	82 1.34 66	4 0.08 4	18 0.51 25	6.8 0.11 5	0.2	0.06	62	172	54
-25B 1 M 8- 8-58 5050		70	7.6	204	15 0.75 38	4 0.33 17	19 0.83 42	3 0.08 4	0	84 1.38 71	2 0.04 2	18 0.51 26	1.5 0.02 1	0.2	0.04	65	169	54
-25B 1 M 7-23-59 5050		72	7.4	200	14 0.70 33	5 0.41 20	21 0.91 43	3 0.08 4	0	84 1.38 68	6 0.12 6	18 0.51 25	1.4 0.02 1	0.1	0.00	64	174	56
-25B 1 M 7-26-60 5128		72	7.7	210	15 0.75 36	5 0.41 20	19 0.83 40	3 0.08 4	0	85 1.39 67	3 0.06 3	21 0.59 29	1.0 0.02 1	0.0	0.11	26	135	58
-25B 1 M 7-26-61 5128		72	7.6	184	13 0.65 36	4 0.33 18	17 0.74 41	4 0.10 5	0	80 1.31 73	4 0.08 4	13 0.37 21	1.6 0.03 2	0.0	0.05	67	163	49
-25B 1 M 6-19-62 5050		71	7.8	197	15 0.75 39	4 0.33 17	18 0.78 40	3 0.08 4	0	80 1.31 72	2 0.04 2	16 0.45 25	1.0 0.02 1	0.1	0.07	68	166	54
-25B 1 M 8- 7-63 5050		72	--	205	--	--	20 0.87	--	--	--	--	18 0.51	--	--	0.00	--	--	53
-25B 1 M 3-19-64 5050		70	7.2	205	--	--	19 0.83	--	--	80 1.31	--	14 0.39	--	--	0.00	--	--	51

MINERAL ANALYSES OF GROUND WATER

FRESNO - MADERA AREA

State Well Number			Temp. when Sampled °F	H p	Specific conductance (micro-mhas at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value						Mineral constituents in parts per million					
Date Sampled Time	Agy. Call.	Calcium Ca				Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chloride Cl	Ni- trate NO ₃	Fluoride F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180° C
11S/17E-35A 1 M 11- 2-61 5050		--	--	194	16 0.70	--	--	--	--	--	18 0.51	--	0.02	--	--	50	
11S/17E-35K 1 M 5- 1-62 5050		--	--	187	17 0.74	--	--	--	--	--	18 0.51	--	0.04	--	--	51	
11S/18E-17H 1 M 7-25-60 5050		--	--	229	17 0.85 37	5 0.41 18	22 0.96 42	3 0.08 3	0 100 1.64 71	5 0.10 4	19 0.54 23	1.0 0.02 1	0.00	--	121	63	
11S/19E- 6E80 M 8-10-60 5050		--	--	316	--	--	29 1.26	--	0 104 1.70	--	39 1.10	--	0.01	--	--	87	
11S/19E-32C 1 M 8-10-60 5050		--	--	218	--	--	20 0.87	--	0 66 1.08	--	16 0.45	--	0.04	--	--	53	
11S/21E-32E 1 M 7-22-59 5050		82	--	618	--	--	--	--	8 0.27 4.33	--	40 1.13	--	--	--	--	177	
12S/14E- 3J 1 M 10- 8-64 5000		--	--	474	--	--	--	--	7 0.23 3.03	--	43 1.21	--	--	--	--	46	
12S/14E-16K 1 M 7-25-61 5128		68	--	783	11 0.55 7	1 0.08 1	154 6.70 91	1 0.03	2 0.07 1	73 1.52 21	111 3.13 43	0.0	0.40	64	494	32	
6-20-62 5050	-16K 1 M	68	--	788	10 0.50 7	2 0.16 2	150 6.52 90	1 0.03	0 2.64 36	67 1.39 19	114 3.21 44	0.5 0.01	0.35	60	484	33	
7-30-64 5050	-16K 1 M	69	--	836	--	--	160 6.96	--	--	--	122 3.44	--	0.50	--	--	34	

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million				
Date Sampled Time	Agy. Coll.				Calcium	Magne-sium	Sodium	Potas-sium	Carbon-ate	Bicar-bonate	Sulfate	Chlo-ride	Ni-trate	Flua-ride	Boron	Sili-co	TDS Computed Evap 180° C
12S/14E-36Q 1 M 10-23-64 5000		--	8.6	1210	--	--	--	--	14 0.47	131 2.15	--	205 5.78	--	--	--	--	47
12S/15E-20L 1 M 10-28-64 5000		68	7.7	304	25 1.25 43	4 0.33 11	30 1.30 44	2 0.05 2	0	130 2.13 76	5 0.10 4	19 0.54 19	2.8 0.05 2	--	0.00	--	79
12S/15E-24H 1 M 10-26-64 5000		--	8.8	327	--	--	--	--	21 0.70	127 2.08	--	16 0.45	--	--	--	--	92
12S/15E-27G 1 M 7-23-57 5050		64	7.3	302	22 1.10 37	4 0.33 11	34 1.48 49	3 0.08 3	0	126 2.07 70	6 0.12 4	26 0.73 25	1.3 0.02 1	0.2	0.03	53	72
-27G 1 M 7-21-59 5050		71	8.0	333	28 1.40 41	4 0.33 10	36 1.57 46	4 0.10 3	0	149 2.44 70	7 0.15 4	32 0.90 26	1.2 0.02 1	0.1	0.00	79	87
-27G 1 M 7-26-60 5128		73	7.8	355	25 1.25 35	8 0.66 19	36 1.57 44	3 0.08 2	0	152 2.49 71	6 0.12 3	32 0.90 25	1.0 0.02 1	0.0	0.88	52	96
-27G 1 M 7-25-61 5128		72	8.1	348	29 1.45 41	5 0.41 12	37 1.61 45	3 0.08 2	0	150 2.46 71	7 0.15 4	29 0.82 24	1.2 0.02 1	0.2	0.05	73	93
-27G 1 M 6-22-62 5641		69	--	366	--	--	37 1.61	2 0.05	--	--	--	32 0.90	--	--	0.07	--	97
-27G 1 M 8-15-63 5050		71	--	381	--	--	55 2.39	--	--	--	--	32 0.90	--	--	0.00	--	101
12S/15E-36J 1 M 10-26-64 5000		--	8.8	414	--	--	--	--	14 0.47	178 2.92	--	25 0.71	--	--	--	--	100

MINERAL ANALYSES OF GROUND WATER

FRESNO - MADERA AREA

State Well Number			Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value						Mineral constituents in parts per million							
						Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180°C	TOTAL hardness as CaCO ₃
12S/18E- 7L 1 M 8- 5-58 5050			68	8.1	230	20 1.00 44	5 0.41 18	17 0.74 33	4 0.10 4	0	106 1.74 77	7 0.15 7	12 0.34 15	2.7 0.04 2	0.1	0.05	65	185	71
- 7L 1 M 7-23-59 5128			69	8.0	214	18 0.90 41	6 0.49 22	16 0.70 32	4 0.10 5	0	102 1.67 79	5 0.10 5	10 0.28 13	4.0 0.06 3	0.1	0.00	65	178	70
- 7L 1 M 7-25-60 5128			72	7.1	226	15 0.75 35	7 0.58 27	16 0.70 33	4 0.10 5	0	99 1.62 77	1 0.02 1	16 0.45 21	1.0 0.02 1	0.0	0.11	43	152	67
- 7L 1 M 7-26-61 5128			68	7.9	205	17 0.85 41	6 0.49 23	15 0.65 31	4 0.10 5	0	92 1.51 73	6 0.12 6	13 0.37 18	3.8 0.06 3	0.2	0.06	64	174	67
- 7L 1 M 6-22-62 5641			68	--	205	--	--	15 0.65	4 0.10	--	--	--	10 0.28	--	--	0.10	--	--	104
- 7L 1 M 8- 7-63 5050			68	--	202	--	--	16 0.70	--	--	--	--	10 0.28	--	--	0.00	--	--	61
- 7L 1 M 8-28-63 5050			68	--	204	--	--	15 0.65	--	--	--	--	10 0.28	--	--	0.00	--	--	61
12S/21E- 6Q 1 M 8-20-63 5000			--	7.2	262	20 1.00 41	7 0.58 24	18 0.78 32	3 0.08 3	0	91 1.11 47	5 0.10 4	11 0.31 13	27.0 0.83 35	0.0	0.10	71	183	79
12S/21E-17L 1 M 6- 3-64 5050			71	7.2	614	55 2.74 43	23 1.89 29	38 1.65 26	5 0.13 2	0	238 3.90 63	50 1.04 17	22 0.62 10	41.0 0.66 11	--	0.00	--	351 414	232
12S/21E-31P 1 M 7-25-57 5000			66	7.6	259	30 1.50 51	10 0.82 28	13 0.57 19	2 0.05 2	0	151 2.47 81	13 0.27 9	6 0.17 5	10.0 0.16 5	0.1	0.02	46	203	116

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (microhmhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value						Mineral constituents in parts per million							
Date Sampled Time	Agy. Coll.				Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
12S/21E-31P 1 M 7-31-58 5050		66	8.0	310	27 1.35 43	15 1.23 39	12 0.52 17	2 0.05 2	0	161 2.64 84	10 0.21 7	5 0.14 4	8.5 0.14 4	0.0	0.05	47	206	129
-31P 1 M 7-20-60 5050		--	7.6	295	29 1.45 46	14 1.15 36	12 0.52 16	2 0.05 2	0	162 2.66 86	8 0.17 6	4 0.11 4	8.5 0.14 5	0.2	0.05	46	203	130
-31P 1 M 6-18-62 5050		83	8.1	258	22 1.10 43	11 0.90 35	12 0.52 20	2 0.05 2	0	126 2.07 81	12 0.25 10	4 0.11 4	7.0 0.11 4	0.2	0.07	48	180	100
-31P 1 M 7-11-63 5631		--	--	344	--	--	13 0.57	--	--	--	--	5 0.14	--	--	0.00	--	--	146
12S/22E-20R 1 M 8- 8-63 5000		70	7.7	602	52 2.59 39	32 2.63 40	30 1.30 20	3 0.08 1	0	334 5.47 83	17 0.35 5	23 0.65 10	6.0 0.10 2	0.1	0.00	49	376	261
12S/22E-30C 2 M 7-20-60 5050		--	8.4	444	41 2.05 43	22 1.81 38	19 0.83 17	3 0.08 2	0	234 3.84 83	8 0.17 4	14 0.39 8	13.0 0.21 5	0.2	0.06	42	277	193
12S/22E-32R 2 M 8-13-63 5000		73	7.5	388	31 1.55 38	20 1.64 40	19 0.83 20	2 0.05 1	0	188 3.08 76	15 0.31 8	13 0.37 9	17.0 0.27 7	0.1	0.00	49	210	160
13S/14E-15B 1 M 2-13-50 5702		--	7.8	--	--	--	--	--	0	189 3.10	582 12.12	251 7.08	--	--	--	--	--	102
-15B 1 M 8-15-51 5050		--	7.4	2230	29 1.45	7 0.58	430 18.70	--	0	646 10.59	528 10.99	260 7.33	--	--	1.00	--	--	106
-15B 1 M 7-14-59 5050		75	7.8	2410	34 1.70 7	5 0.41 2	516 22.44 91	3 0.08	0	202 3.31 13	635 13.22 53	300 8.46 34	0.9 0.01	0.4	1.20	48	1643	106

MINERAL ANALYSES OF GROUND WATER

SEMI-CONFINED AQUIFER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value						Mineral constituents in parts per million							
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
13S/14E-15B 1 M 8-13-59 5050		77	8.1	2400	35 1.75 7	5 0.41 2	491 21.35 91	3 0.08	0	203 3.33 14	581 12.10 52	284 8.01 34	0.3	0.4	1.20	51	1552	108
-15B 1 M 7-19-60 5050		--	8.3	2170	34 1.70 7	4 0.33 1	494 21.48 91	3 0.08	5 0.17 1	186 3.05 13	584 12.16 52	286 8.07 34	0.7 0.01	0.4	1.20	51	1555	102
-15B 1 M 8-25-61 5050		77	8.5	2300	32 1.60 7	5 0.41 2	488 21.22 91	2 0.05	8 0.27 1	180 2.95 12	540 11.24 46	350 9.87 41	0.6 0.01	0.4	1.10	57	1573	101
-15B 1 M 4-26-62 5050		77	8.1	2320	36 1.80 8	2 0.16 1	497 21.61 91	2 0.05	0	207 3.39 15	591 12.30 53	270 7.61 33	0.0	0.5	1.19	43	1544	98
-15B 1 M 8-26-63 5050		76	--	2450	--	--	488 21.22	--	--	--	--	300 8.46	--	--	1.10	--	--	108
13S/15E-6E 1 M 4-10-56 5050		--	7.8	913	30 1.50 18	1 0.08 1	155 6.74 80	3 0.08 1	0	158 2.59 30	70 1.46 17	159 4.48 52	1.0 0.02	0.0	2.00	--	499	79
13S/15E-11P 1 M 10-23-64 5050		--	8.4	596	18 0.90 15	3 0.25 4	110 4.78 80	2 0.05 1	6 0.20 3	276 4.52 74	14 0.29 5	38 1.07 18	1.4 0.02	--	0.20	--	328 404	58
13S/15E-24D 1 M 10-26-64 5000		--	9.0	411	--	--	--	--	23 0.77	195 3.20	--	12 0.34	--	--	--	--	--	51
13S/15E-35E 1 M 5-28-51 5001		--	--	110	--	--	1 0.04	--	--	--	--	6 0.17	--	--	--	--	--	--
-35E 1 M 10-16-52 5001		67	--	100	10 0.50 45	3 0.25 23	7 0.30 27	2 0.05 5	--	43 0.70 65	0	13 0.37 34	0.9 0.01 1	--	--	--	57 68	38

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boron B	Sili- co SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
13S/15E-35E 1 M 12-14-60 5001		67	7.6	427	12 0.60 15	5 0.41 10	67 2.91 73	2 0.05 1	0	145 2.38 61	10 0.21 5	43 1.21 31	6.2 0.10 3	--	0.06	--	216 284	51
13S/16E- 2C 2 M 7-25-57 5050		71	7.8	270	19 0.95 34	7 0.58 21	28 1.22 44	2 0.05 2	0	133 2.18 80	4 0.08 3	16 0.45 16	2.0 0.03 1	0.3	0.00	58	202 201	77
8- 6-58 5050 - 2C 2 M		70	8.1	282	20 1.00 38	4 0.33 13	29 1.26 48	2 0.05 2	0	129 2.11 80	3 0.06 2	16 0.45 17	1.0 0.02 1	0.2	0.12	83	222	67
7-23-59 5128 - 2C 2 M		71	7.9	280	23 1.15 38	6 0.49 16	30 1.30 43	2 0.05 2	0	142 2.33 80	3 0.06 2	18 0.51 17	1.3 0.02 1	0.1	0.00	83	236	82
7-25-60 5128 - 2C 2 M		72	7.6	298	16 0.80 27	10 0.82 28	30 1.30 44	2 0.05 2	0	143 2.34 79	3 0.06 2	19 0.54 18	2.0 0.03 1	0.1	0.09	58	210	81
7-25-61 5128 - 2C 2 M		72	8.1	328	28 1.40 41	8 0.66 19	30 1.30 38	2 0.05 1	0	165 2.70 81	5 0.10 3	18 0.51 15	2.7 0.04 1	0.2	0.05	78	253	103
6-21-62 5641 - 2C 2 M		69	--	351	--	--	30 1.30	2 0.05	--	--	--	18 0.51	--	--	0.08	--	--	114
8-15-63 5050 - 2C 2 M		71	--	395	--	--	31 1.35	--	--	--	--	19 0.54	--	--	0.00	--	--	130
13S/16E- 7R 1 M 10-26-64 5000		--	8.7	691	--	--	32 1.39	--	10 0.33	125 2.05	--	114 3.22	--	--	--	--	--	117
13S/16E-18F 1 M 10-26-64 5000		--	9.1	639	--	--	--	--	48 1.60	169 2.77	--	63 1.78	--	--	--	--	--	79

MINERAL ANALYSES OF GROUND WATER

SEMI-CONFINED AQUIFER
FRESNO - MADERA AREA

State Well Number			Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value						Mineral constituents in parts per million							
						Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
13S/16E-36R 3 M 8-14-63 5000			69	7.6	756	79 3.94 53	17 1.40 19	46 2.00 27	5 0.13 2	0	212 3.47 46	49 1.02 13	110 3.10 41	0.8 0.01	0.2	0.00	50	461	267
13S/17E-1L 1 M 9- 3-63 5000			71	7.4	237	17 0.85 37	5 0.41 18	22 0.96 42	2 0.05 2	0	92 1.51 47	44 0.92 29	23 0.65 20	8.1 0.13 4	0.3	0.00	77	244 204	63
13S/17E- 5P 1 M 7-22-57 5050			80	7.5	260	21 1.05 41	4 0.33 13	26 1.13 44	2 0.05 2	0	111 1.82 71	7 0.15 6	19 0.54 21	4.0 0.06 2	0.0	0.00	77	215	69
8- 6-58 5050			80	7.9	265	20 1.00 37	6 0.49 18	26 1.13 42	2 0.05 2	0	113 1.85 67	8 0.17 6	24 0.68 25	2.8 0.05 2	0.2	0.00	80	225	75
7-23-59 5128			72	7.9	252	22 1.10 42	3 0.25 10	28 1.22 47	2 0.05 2	0	111 1.82 70	5 0.10 4	23 0.65 25	2.5 0.04 2	0.1	0.00	81	221	68
7-25-60 5128			79	8.0	661	71 3.54 52	14 1.15 17	47 2.04 30	2 0.05 1	0	274 4.49 66	30 0.62 9	54 1.52 22	8.0 0.13 2	0.0	0.22	53	414	235
7-25-61 5128			77	8.0	638	70 3.49 52	13 1.07 16	48 2.09 31	2 0.05 1	0	277 4.54 69	27 0.56 9	40 1.13 17	21.0 0.34 5	0.2	0.16	72	430	228
6-19-62 5050			78	8.2	794	87 4.34 52	19 1.56 19	55 2.39 29	3 0.08 1	0	342 5.61 68	40 0.83 10	52 1.47 18	23.0 0.37 4	0.1	0.18	72	519	295
8-15-63 5050			75	--	718	--	--	67 2.91	--	--	--	--	50 1.41	--	--	0.20	--	226	
3-19-64 5050			76	7.9	530	48 2.40 45	11 0.90 17	47 2.04 38	2 0.05 1	0	218 3.57 68	25 0.52 10	30 0.85 16	19.0 0.29 6	--	0.10	--	358	165

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlor- ide Cl	Ni- trate NO ₃	Fluor- ide F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180°C as CaCO ₃	
13S/17E-12J 1 M 9-26-63 5050		--	8.3	600	51 2.54 39	20 1.64 25	53 2.30 35	3 0.08 1	0	304 4.98 77	43 0.90 14	16 0.45 7	9.5 0.15 2	--	0.20	--	345 385	209
13S/17E-14R 1 M 7-20-60 5050		66	8.3	389	19 0.95 22	10 0.82 19	56 2.43 57	1 0.03 1	2 0.07 2	216 3.54 83	15 0.31 7	8 0.23 5	5.9 0.10 2	0.2	0.11	68	291	89
13S/17E-22B 1 M 6-25-63 5631		--	7.6	747	59 2.94 38	18 1.48 19	76 3.30 42	2 0.05 1	0	372 6.10 77	42 0.87 11	21 0.59 7	25.0 0.40 5	0.1	0.16	59	485 467	221
13S/17E-27J 1 M 6-4-64 5050		71	7.9	473	43 2.15 47	16 1.32 29	24 1.04 23	3 0.08 2	0	160 2.62 59	14 0.29 7	44 1.24 28	19.0 0.31 7	--	0.00	--	318	174
13S/18E-2L 1 M 6-11-64 5050		68	7.7	499	36 1.80 35	14 1.15 22	47 2.04 39	7 0.18 3	0	251 4.11 81	13 0.27 5	17 0.48 10	12.0 0.19 4	--	0.10	--	340	148
13S/18E-33L 1 M 7-5-57 5050		66	8.3	525	24 1.20 24	21 1.73 34	46 2.00 39	6 0.15 3	6 0.20 4	169 2.77 56	14 0.29 6	55 1.55 31	11.0 0.18 4	0.2	0.00	96	362	147
13S/18E-33L 1 M 7-20-60 5050		68	8.2	498	28 1.40 29	20 1.64 33	40 1.74 35	5 0.13 3	0	189 3.10 65	8 0.17 4	48 1.35 28	11.0 0.18 4	0.1	0.10	58	311	152
13S/19E-27L 1 M 8-12-63 5000		--	7.4	385	34 1.70 42	15 1.23 31	22 0.96 24	5 0.13 3	0	201 3.29 82	11 0.23 6	10 0.28 7	12.0 0.19 5	0.2	0.00	70	278	147
13S/19E-29E 1 M 7-17-63 5050		--	7.7	311	30 1.50 49	8 0.66 21	18 0.78 25	5 0.13 4	0	141 2.31 77	6 0.12 4	13 0.37 12	13.0 0.21 7	0.2	0.06	102	265 237	108
13S/19E-30L 1 M 7-20-60 5050		75	7.5	231	15 0.75 32	10 0.82 35	16 0.70 30	4 0.10 4	0	125 2.05 86	3 0.06 3	9 0.25 11	0.5 0.01	0.2	0.05	59	178	79

MINERAL ANALYSES OF GROUND WATER

FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	H _p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					
Dote Sampled Time	Agy. Coll.				Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carban- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180°C	TOTAL hardness as CaCO ₃
13S/19E-30L 1 M 10-18-61 5050		--	8.2	253	20 1.00 38	10 0.82 31	17 0.74 28	4 0.10 4	0	122 2.00 78	5 0.10 4	10 0.28 11	11.0 0.18 7	0.1	0.00	77	214	91
8-30L 1 M 8- 2-62 5050		71	--	257	--	2 0.16	17 0.74	4 0.10	--	--	--	9 0.25	--	--	0.07	--	--	8
13S/19E-32D 1 M 6-13-63 5050		--	7.4	356	26 1.30 37	14 1.15 33	21 0.91 26	5 0.13 4	0	157 2.57 74	9 0.19 6	15 0.42 12	17.0 0.27 8	0.2	0.07	73	257 262	123
13S/19E-32M 1 M 5- 9-52 5050		65	7.7	486	30 1.50 30	17 1.40 28	45 1.96 39	5 0.13 3	0	215 3.52 72	11 0.23 5	31 0.87 18	15.0 0.24 5	0.1	0.03	72	332	145
--32M 1 M 8-12-63 5000		--	7.5	832	50 2.50 28	21 1.73 19	105 4.57 51	6 0.15 2	0	373 6.11 71	27 0.56 7	50 1.41 16	31.0 0.50 6	0.3	0.20	62	536	212
13S/19E-36E 2 M 5-28-63 5050		72	8.0	281	16 0.80 36	8 0.66 30	14 0.61 28	5 0.13 6	0	108 1.77 84	3 0.06 3	4 0.11 5	10.0 0.16 8	0.2	0.05	73	186 180	73
13S/20E- 3C 1 M 7-20-60 5050		--	8.0	214	19 0.95 44	8 0.66 30	11 0.48 22	3 0.08 4	0	109 1.79 85	2 0.04 2	6 0.17 8	6.7 0.11 5	0.2	0.11	63	173	81
-- 3C 1 M 6-12-63 5050		--	--	--	--	--	--	--	--	--	--	--	10.0 0.16	--	--	--	--	--
-- 3C 1 M 6- 9-64 5050		73	7.8	215	18 0.90 41	9 0.74 34	11 0.48 22	3 0.08 4	0	110 1.80 85	2 0.04 2	6 0.17 8	7.6 0.12 6	--	0.10	--	162	82
13S/20E- 3P 1 M 7- 5-61 5060		--	7.6	--	19 0.95 39	10 0.82 34	13 0.57 23	4 0.10 4	0	122 2.00 83	3 0.06 2	6 0.17 7	12.0 0.19 8	0.2	--	--	127	89

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	H _p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
13S/20E-4J 1 M 7- 5-61 5060		--	7.5	--	17 0.85 38	9 0.74 33	12 0.52 24	4 0.10 5	0	110 1.80 80	3 0.06 3	9 0.25 11	8.8 0.14 6	0.2	--	--	117	80
13S/20E-4M 1 M 1-11-62 5060		--	7.7	--	23 1.15 41	10 0.82 29	16 0.70 25	5 0.13 5	0	134 2.20 82	8 0.17 6	7 0.20 7	6.2 0.10 4	0.1	--	--	141	99
13S/20E-4R 1 M 1-11-62 5060		--	8.1	--	18 0.90 41	8 0.66 30	13 0.57 26	3 0.08 4	0	107 1.75 77	1 0.02 1	7 0.20 9	17.7 0.29 13	0.1	--	--	120	78
13S/20E-6F 1 M 6-11-63 5050		71	8.0	212	21 1.05 48	5 0.41 19	15 0.65 30	3 0.08 4	0	104 1.70 82	3 0.06 3	7 0.20 10	7.1 0.11 5	0.4	0.28	56	169 199	73
13S/20E-8A 1 M 1-11-62 5060		--	7.7	--	18 0.90 40	9 0.74 33	12 0.52 23	4 0.10 4	0	117 1.92 88	3 0.06 3	6 0.17 8	2.2 0.04 2	0.1	--	--	112	82
13S/20E-8E 1 M 10-22-59 5060		--	7.7	--	18 0.90 38	9 0.74 31	15 0.65 27	4 0.10 4	0	118 1.93 82	5 0.10 4	7 0.20 9	6.6 0.11 5	0.1	--	--	123	82
-- 8E 1 M 6-11-63 5050		70	--	--	--	--	--	--	--	--	--	--	7.8 0.13	--	--	--	--	--
13S/20E-9Q 1 M 5-28-63 5050		71	8.1	206	19 0.95 39	10 0.82 34	13 0.57 24	3 0.08 3	0	118 1.93 84	4 0.08 3	5 0.14 6	9.6 0.15 7	0.2	0.06	69	191 182	89
-- 9Q 1 M 8- 2-63 5050		--	--	--	--	--	--	--	--	--	--	--	12.0 0.19	--	--	--	--	--
13S/20E-12L 1 M 7-29-58 5050		70	7.5	214	16 0.80 37	10 0.82 38	11 0.48 22	2 0.05 2	0	110 1.80 87	2 0.04 2	4 0.11 5	6.8 0.11 5	0.2	0.00	54	160	81

MINERAL ANALYSES OF GROUND WATER

SEMI-CONFINED AQUIFER
FRESNO - MADERA AREA

State Well Number			Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value						Mineral constituents in parts per million							
						Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Baron B	Silica SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
13S/20E-12L 1 M 7-20-60 5050			--	7.9	219	18 0.90 41	10 0.82 37	10 0.43 20	2 0.05 2	0	115 1.88 87	4 0.08 4	4 0.11 5	6.4 0.10 5	0.1	0.06	60	171	86
-12L 1 M 4-26-62 5050			70	8.2	264	24 1.20 42	12 0.99 35	14 0.61 21	2 0.05 2	0	160 2.62 92	0	8 0.23 8	0.0	0.5	0.06	27	166 200	110
-12L 1 M 6-14-63 5050			--	7.8	155	14 0.70 45	5 0.41 26	9 0.39 25	2 0.05 3	0	80 1.31 86	5 0.10 7	4 0.11 7	0.8 0.01 1	0.2	0.02	23	102 86	56
13S/20E-16L 2 M 8- 7-57 5060			--	7.5	--	26 1.30 44	11 0.90 31	15 0.65 22	4 0.10 3	0	129 2.11 71	7 0.15 5	12 0.34 11	24.3 0.39 13	0.1	--	--	163	110
13S/20E-16L 3 M 8- 7-57 5060			--	8.1	--	17 0.85 39	8 0.66 30	13 0.57 26	4 0.10 5	0	104 1.70 78	5 0.10 5	10 0.28 13	6.6 0.11 5	0.1	--	--	115	76
13S/20E-17G 1 M 3- 6-51 5060			--	7.1	--	17 0.85 44	9 0.74 38	8 0.35 18	--	--	95 1.56 79	7 0.15 8	6 0.17 9	5.3 0.09 5	0.0	--	--	99	80
-17G 1 M 9- 3-63 5060			--	7.7	--	19 0.95 39	10 0.82 34	13 0.57 23	4 0.10 4	0	120 1.97 85	5 0.10 4	5 0.14 6	7.1 0.11 5	0.1	--	--	122	89
13S/20E-17G 2 M 5- 5-55 5060			--	8.1	--	17 0.85 37	9 0.74 32	15 0.65 28	3 0.08 3	0	122 2.00 90	3 0.06 3	4 0.11 5	3.5 0.06 3	--	--	--	114	80
-17G 2 M 9- 3-63 5060			--	8.2	--	33 1.65 46	13 1.07 30	17 0.74 21	5 0.13 4	--	172 2.82 81	8 0.17 5	8 0.23 7	15.9 0.26 7	0.1	--	--	185 248	136
13S/20E-17J 1 M 8- 7-57 5060			--	7.9	--	18 0.90 44	7 0.58 28	11 0.48 23	4 0.10 5	0	108 1.77 83	4 0.08 4	4 0.11 5	11.1 0.18 8	0.2	--	--	112	74

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180°C	TOTAL hardness as CaCO ₃
13S/20E-19C 1 M 8-27-57 5060		--	7.8	--	15 0.75 35	9 0.74 35	13 0.57 27	3 0.08 4	0	101 1.66 79	5 0.10 5	5 0.14 7	11.5 0.19 9	0.1	--	--	111	75
-19C 1 M 6-10-64 5050		70	7.7	213	16 0.80 36	9 0.74 33	13 0.57 26	4 0.10 5	0	108 1.77 83	4 0.08 4	5 0.14 7	8.6 0.14 7	--	0.00	--	113 184	77
13S/20E-20H 1 M 12-12-56 5060		--	7.5	--	17 0.85 38	8 0.66 29	15 0.65 29	4 0.10 4	0	95 1.56 70	10 0.21 9	9 0.25 11	12.4 0.20 9	0.0	--	--	122	76
-20H 1 M 6-10-64 5050		71	7.5	225	17 0.85 37	10 0.82 36	12 0.52 23	4 0.10 4	0	107 1.75 77	5 0.10 4	7 0.20 9	13.0 0.21 9	--	0.00	--	121 194	84
13S/20E-20N 1 M 8-27-57 5060		--	7.7	--	14 0.70 40	6 0.49 28	11 0.48 27	3 0.08 5	0	80 1.31 75	6 0.12 7	5 0.14 8	10.6 0.17 10	0.2	--	--	95	60
-20N 1 M 6-26-63 5050		70	7.7	194	16 0.80 41	7 0.58 30	11 0.48 24	4 0.10 5	0	93 1.52 81	3 0.06 3	5 0.14 7	10.0 0.16 9	0.1	0.06	68	170 168	69
13S/20E-20R 1 M 8-27-58 5060		--	7.7	--	14 0.70 36	8 0.66 34	11 0.48 25	4 0.10 5	0	91 1.49 75	7 0.15 8	5 0.14 7	13.7 0.22 11	0.1	--	--	108	68
13S/20E-21J 1 M 8-27-57 5060		--	7.7	--	9 0.45 33	5 0.41 30	10 0.43 31	3 0.08 6	0	71 1.16 82	5 0.10 7	3 0.08 6	4.9 0.08 6	0.1	--	--	75	43
-21J 1 M 11-19-62 5060		--	7.5	--	10 0.50 33	6 0.49 33	10 0.43 29	3 0.08 5	0	73 1.20 84	4 0.08 6	3 0.08 6	4.4 0.07 5	0.1	--	--	76	50
13S/20E-22L 1 M 8-27-59 5060		--	7.7	--	9 0.45 31	6 0.49 34	10 0.43 30	3 0.08 6	0	70 1.15 85	4 0.08 6	2 0.06 4	4.4 0.07 5	0.1	--	--	73	47

SEMI-CONFINED AQUIFER **MINERAL ANALYSES OF GROUND WATER** FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					
					Calcium Co	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
13S/20E-22L 1 M 6-10-64 5050		69	7.6	161	10 0.50 32	7 0.58 37	9 0.39 25	0.08 5	0	80 1.31 85	3 0.06 4	3 0.08 5	6.5 0.10 6	--	0.10	--	81 141	54
13S/20E-23B 1 M 12-12-56 5060		--	8.0	--	14 0.70 31	10 0.82 36	15 0.65 29	3 0.08 4	0	87 1.43 73	7 0.15 8	6 0.17 9	12.4 0.20 10	0.0	--	--	110	76
-23B 1 M 6-10-64 5050		70	7.6	212	15 0.75 35	10 0.82 38	12 0.52 24	3 0.08 4	0	102 1.67 80	6 0.12 6	4 0.11 5	11.0 0.18 9	--	0.10	--	111 170	79
13S/20E-23J 1 M 10-14-60 5060		--	7.6	--	15 0.75 32	10 0.82 35	15 0.65 28	4 0.10 4	0	104 1.70 74	7 0.15 7	6 0.17 7	16.8 0.27 12	0.1	--	--	125	79
-23J 1 M 6-11-64 5050		69	7.7	229	14 0.70 31	10 0.82 36	15 0.65 29	3 0.08 4	0	106 1.74 78	6 0.12 5	5 0.14 6	14.0 0.23 10	--	0.10	--	176	76
13S/20E-23Q 1 M 12-12-56 5060		--	8.2	--	19 0.95	6 0.49	15 0.65	3 0.08	--	74 1.21	12 0.25	7 0.20	8.0 0.13	0.0	--	--	114 161	72
13S/20E-26D 1 M 6-11-64 5050		69	7.8	152	9 0.45 28	7 0.58 36	11 0.48 30	3 0.08 5	0	74 1.21 83	3 0.06 4	3 0.08 5	6.6 0.11 8	--	0.10	--	138	52
13S/20E-27F 1 M 5-1-52 5050		70	7.8	164	11 0.55 34	6 0.49 31	11 0.48 30	3 0.08 5	0	82 1.34 84	5 0.10 6	2 0.06 4	6.1 0.10 6	0.0	0.02	69	153	52
-27F 1 M 5-17-55 5060		--	7.7	--	13 0.65 36	7 0.58 32	12 0.52 28	3 0.08 4	0	87 1.43 84	6 0.12 7	2 0.06 4	5.3 0.09 5	0.0	--	--	91	62
-27F 1 M 4-15-59 5050		70	7.4	165	9 0.45 31	6 0.49 34	10 0.43 30	3 0.08 6	0	72 1.18 79	6 0.12 8	3 0.08 5	6.7 0.11 7	0.2	0.15	41	120	47

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	H p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180°C	TOTAL hardness as CaCO ₃
13S/20E-27F 1 M 6-10-64 5050		72	7.8	154	9 0.45 30	6 0.49 33	11 0.48 32	3 0.08 5	0	72 1.18 79	5 0.10 7	3 0.08 5	8.4 0.14 9	--	0.10	--	147	47
13S/20E-27G 1 M 12- 1-49 5702		--	7.8	--	11 0.55	7 0.58	21 0.91	--	0	95 1.56	18 0.37	7 0.20	--	--	--	--	210	57
10-25-51 5050		65	8.0	185	12 0.60 33	7 0.58 32	13 0.57 31	3 0.08 4	0	90 1.48 81	6 0.12 7	4 0.11 6	7.6 0.12 7	0.0	0.00	69	166	59
13S/20E-27J 1 M 5-17-55 5060		--	7.8	--	13 0.65 34	7 0.58 30	14 0.61 31	4 0.10 5	0	100 1.64 81	8 0.17 8	4 0.11 5	7.1 0.11 5	0.1	--	--	106	62
7-29-58 5050		70	7.9	213	14 0.70 34	8 0.66 32	14 0.61 29	4 0.10 5	0	104 1.70 82	5 0.10 5	4 0.11 5	9.9 0.16 8	0.2	0.00	65	175	68
7-21-60 5050		70	7.9	219	16 0.80 36	9 0.74 33	13 0.57 26	4 0.10 5	0	107 1.75 82	6 0.12 6	4 0.11 5	10.0 0.16 7	0.2	0.06	66	181	77
10-19-61 5200		73	8.2	224	14 0.70 31	10 0.82 36	15 0.65 29	4 0.10 4	0	106 1.74 79	6 0.12 5	6 0.17 8	10.0 0.16 7	0.1	0.00	65	182	76
6-19-62 5200		71	--	243	--	--	15 0.65	4 0.10	--	--	--	5 0.14	--	--	0.07	--	--	75
6-26-63 5050		--	7.8	233	18 0.90 38	9 0.74 31	15 0.65 27	4 0.10 4	0	108 1.77 77	7 0.15 7	5 0.14 6	14.0 0.23 10	0.1	0.16	65	190 182	82
13S/20E-28C 1 M 5- 2-52 5050		67	7.7	182	14 0.70 39	7 0.58 32	10 0.43 24	4 0.10 6	0	92 1.51 84	5 0.10 6	4 0.11 6	5.2 0.08 4	0.0	0.00	63	157	64

TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number			Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
						Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
13S/20E-28C 1 M 8-27-57 5060			--	7.8	--	13 0.65 32	9 0.74 37	12 0.52 26	4 0.10 5	0	89 1.46 77	6 0.12 6	5 0.14 7	11.1 0.18 9	0.0	--	--	104	70
-28C 1 M 6-10-64 5050			67	7.7	243	18 0.90 35	12 0.99 39	12 0.52 20	5 0.13 5	0	120 1.97 79	8 0.17 7	6 0.17 7	11.0 0.18 7	--	0.00	--	131 194	95
13S/20E-30Q 1 M 6-11-64 5050			71	7.8	203	13 0.65 32	9 0.74 36	13 0.57 28	4 0.10 5	0	103 1.69 86	2 0.04 2	5 0.14 7	6.5 0.10 5	--	0.10	0	103 139	70
13S/20E-32D 1 M 10-14-60 5060			--	7.6	--	14 0.70 31	9 0.74 33	15 0.65 29	6 0.15 7	0	94 1.54 72	5 0.10 5	7 0.20 9	18.1 0.29 14	0.0	--	--	120	72
-32D 1 M 6-26-63 5050			70	7.7	239	16 0.80 35	9 0.74 32	14 0.61 27	6 0.15 7	0	86 1.41 72	4 0.08 4	7 0.20 10	16.0 0.26 13	0.2	0.04	74	188 198	77
13S/20E-32L 2 M 8-27-57 5060			--	7.8	--	19 0.95 33	12 0.99 34	19 0.83 28	6 0.15 5	0	99 1.62 67	11 0.23 9	9 0.25 10	20.4 0.33 14	0.0	--	--	145	97
-32L 2 M 6-10-64 5050			71	7.9	311	21 1.05 35	13 1.07 36	17 0.74 25	6 0.15 5	0	132 2.16 73	7 0.15 5	11 0.31 10	22.0 0.35 12	--	0.10	--	162 226	106
13S/20E-33D 1 M 5-1-52 5050			70	7.7	302	20 1.00 33	14 1.15 38	17 0.74 24	6 0.15 5	0	147 2.41 80	10 0.21 7	8 0.23 8	11.0 0.18 6	0.0	0.00	74	232	108
-33D 1 M 8-27-57 5060			--	7.9	--	21 1.05 34	13 1.07 35	19 0.83 27	6 0.15 5	0	142 2.33 77	9 0.19 6	9 0.25 8	17.0 0.27 9	0.1	--	--	164	106
-33D 1 M 4-15-59 5050			70	7.8	317	23 1.15 36	13 1.07 34	19 0.83 26	5 0.13 4	0	153 2.51 80	10 0.21 7	8 0.23 7	11.0 0.18 6	0.1	0.08	72	236	111

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	H P	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reductance value								Mineral constituents in parts per million					
Date Sampled Time	Avg. Coll.				Calcium Ca	Magne-sium Mg	Sodium Na	Potas-sium K	Carban-ate CO ₃	Bicar-bonate HCO ₃	Sulfate SO ₄	Chlo-ride Cl	Ni-trate NO ₃	Fluo-ride F	Boro-n B	Sili-ca SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
13S/20E-33P 1 M 5- 1-52 5050		69	7.7	298	32 1.60 51	8 0.66 21	16 0.70 23	6 0.15 5	0	152 2.49 81	9 0.19 6	8 0.23 8	9.5 0.15 5	0.0	0.00	73	236	113
-33P 1 M 8-27-57 5060		--	8.2	--	23 1.15 37	13 1.07 34	18 0.78 25	5 0.13 4	0	145 2.38 78	7 0.15 5	10 0.28 9	16.0 0.26 8	0.0	--	--	163	111
-33P 1 M 4-15-59 5050		68	7.8	379	30 1.50 39	18 1.48 38	18 0.78 20	5 0.13 3	0	185 3.03 81	13 0.27 7	10 0.28 7	11.0 0.18 5	0.1	0.08	73	269	149
-33P 1 M 6-10-64 5050		70	7.0	322	23 1.15 35	15 1.23 38	17 0.74 23	6 0.15 5	0	157 2.57 82	8 0.17 5	7 0.20 6	12.0 0.19 6	--	0.10	--	165 215	119
13S/20E-34B 1 M 5-17-55 5060		--	7.7	--	18 0.90 33	11 0.90 33	18 0.78 29	5 0.13 5	0	124 2.03 75	11 0.23 9	7 0.20 7	15.0 0.24 9	0.1	--	--	146	90
-34B 1 M 6-10-64 5050		71	7.6	265	18 0.90 33	12 0.99 36	16 0.70 26	5 0.13 5	0	124 2.03 81	8 0.17 7	7 0.20 7	16.0 0.26 10	--	0.00	--	221	95
13S/20E-34M 1 M 8-30-51 5050		--	8.8	396	30 1.50 36	19 1.56 37	23 1.00 24	6 0.15 4	14 0.47 11	174 2.85 67	10 0.21 5	14 0.39 9	21.0 0.34 8	0.0	0.00	75	298	153
-34M 1 M 4-15-59 5050		70	7.6	273	20 1.00 37	10 0.82 30	18 0.78 29	5 0.13 5	0	123 2.02 73	7 0.15 5	8 0.23 8	22.0 0.35 13	0.3	0.18	31	182	91
-34M 1 M 5- 1-63 5050		71	7.7	281	19 0.95 37	9 0.74 28	18 0.78 30	5 0.13 5	0	122 2.00 80	6 0.12 5	7 0.20 8	12.0 0.19 8	0.2	0.05	68	204 192	85
13S/20E-35D 1 M 5- 1-51 5050		68	7.7	171	16 0.80 46	4 0.33 19	12 0.52 30	3 0.08 5	0	89 1.46 82	6 0.12 7	4 0.11 6	5.2 0.08 5	0.1	0.00	70	164	57

MINERAL ANALYSES OF GROUND WATER

FRESNO - MADERA AREA

State Well Number			Temp. when Sampled ° F	H p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
						Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
13S/20E-35D 1 M 5-17-55 5060			--	7.9	--	14 0.70 37	6 0.49 26	14 0.61 32	4 0.10 5	0	94 1.54 81	10 0.21 11	4 0.11 6	1.8 0.03 2	0.1	--	--	100	60
4-15-59 5050 -35D 1 M			67	7.4	229	16 0.80 38	8 0.66 31	13 0.57 27	4 0.10 5	0	98 1.61 78	9 0.19 9	6 0.17 8	6.1 0.10 5	0.2	0.22	36	147	73
13S/21E-4P 1 M 6-13-50 5060			--	7.4	--	22 1.10 38	12 0.99 34	19 0.83 28	--	--	147 2.41 83	3 0.06 2	10 0.28 10	8.8 0.14 5	0.0	--	--	147	105
4-30-62 5060 -4P 1 M			--	8.1	--	20 1.00 34	14 1.15 39	16 0.70 24	3 0.08 3	0	142 2.33 79	3 0.06 2	11 0.31 11	14.6 0.24 8	0.2	--	--	152	108
13S/21E-8J 1 M 4-12-59 5060			--	7.8	--	23 1.15 36	14 1.15 36	18 0.78 25	3 0.08 3	0	144 2.36 78	3 0.06 2	10 0.28 9	20.7 0.33 11	0.1	--	--	163	115
13S/21E-15N 2 M 7-29-58 5050			70	7.8	163	9 0.45 29	6 0.49 31	13 0.57 37	2 0.05 3	0	81 1.33 85	3 0.06 4	3 0.08 5	5.5 0.09 6	0.3	0.00	44	126	47
7-20-60 5050 -15N 2 M			--	7.8	167	10 0.50 29	7 0.58 34	13 0.57 34	2 0.05 3	0	84 1.38 84	5 0.10 6	3 0.08 5	5.1 0.08 5	0.2	0.08	44	131	54
4-26-62 5050 -15N 2 M			70	8.1	238	9 0.45 25	7 0.58 33	16 0.70 39	2 0.05 3	0	81 1.33 76	7 0.15 9	7 0.20 11	4.0 0.06 3	0.3	0.02	29	121 150	52
5-16-63 5050 -15N 2 M			--	7.9	152	8 0.40 27	6 0.49 34	12 0.52 36	2 0.05 3	0	76 1.25 86	4 0.08 6	2 0.06 4	3.7 0.06 4	0.2	0.04	45	120 114	45
13S/21E-17F 1 M 5-16-63 5050			71	7.9	254	17 0.85 35	10 0.82 33	16 0.70 29	3 0.08 3	0	106 1.74 73	12 0.25 11	7 0.20 8	11.0 0.18 8	0.2	0.03	62	190 177	84

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	H _p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
13S/21E-19A 1 M 5-29-63 5050		--	7.5	230	14 0.70 31	10 0.82 36	14 0.61 27	5 0.13 6	0	111 1.82 82	11 0.23 10	3 0.08 4	5.2 0.08 4	0.2	0.04	68	185 174	76
13S/21E-31E 2 M 11-10-61 5060		--	7.6	--	7 0.35 23	7 0.58 39	11 0.48 32	3 0.08 5	0	67 1.10 80	4 0.08 6	3 0.08 6	7.5 0.12 9	0.2	--	--	76	47
--31E 2 M 5- 2-62 5060		--	8.0	--	26 1.30 34	17 1.40 37	23 1.00 26	4 0.10 3	0	171 2.80 75	12 0.25 7	13 0.37 10	18.6 0.30 8	0.0	--	--	198	135
--31E 2 M 10-29-63 5050		--	7.4	393	28 1.40 36	17 1.40 36	24 1.04 26	4 0.10 3	0	178 2.92 75	13 0.27 7	13 0.37 10	20.0 0.32 8	0.1	0.09	57	272	140
13S/21E-31Q 1 M 5-27-63 5050		72	--	--	--	--	--	--	--	--	--	--	16.0 0.26	--	--	--	--	--
--31Q 1 M 6-24-63 5060		--	8.1	--	49 2.45 40	27 2.22 37	28 1.22 20	7 0.18 3	0	283 4.64 77	27 0.56 9	18 0.51 8	22.0 0.35 6	--	--	--	317	234
13S/21E-33K 1 M 7-21-60 5050		68	8.0	274	22 1.10 40	14 1.15 41	11 0.48 17	2 0.05 2	0	120 1.97 71	16 0.33 12	4 0.11 4	23.0 0.37 13	0.2	0.08	59	210	113
--33K 1 M 6-22-62 5050		69	8.1	242	21 1.05 42	10 0.82 33	13 0.57 23	2 0.05 2	0	113 1.85 76	11 0.23 9	4 0.11 4	16.0 0.26 11	0.1	0.04	57	190	94
--33K 1 M 3-16-64 5050		69	7.6	216	--	--	12 0.52	--	--	--	--	2 0.06	--	--	0.00	--	--	79
13S/21E-36R 1 M 8-20-63 5050		68	7.8	173	9 0.45 29	6 0.49 32	13 0.57 37	1 0.03 2	0	73 1.20 84	6 0.12 8	3 0.03 6	1.9 0.03 2	0.1	0.00	44	120	47

MINERAL ANALYSES OF GROUND WATER

FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlor- ide Cl	Ni- trate NO ₃	Fluor- ide F	Boron B	Sili- co SiO ₂	TDS Computed Evap 180°C CaCO ₃	TOTAL hardness as CaCO ₃
13S/22E-10M 1 M 6- 3-64 5050		72	7.7	515	45 2.25 42	24 1.97 37	25 1.09 20	3 0.08 1	0	259 4.25 81	9 0.19 4	20 0.56 11	14.0 0.23 4	--	0.00	--	322	211
13S/22E-14D 1 M 8- 8-63 5000		71	7.6	553	30 1.50 27	35 2.88 52	25 1.09 20	2 0.05 1	0	270 4.43 82	10 0.21 4	18 0.51 9	14.0 0.23 4	0.2	0.00	45	312	219
13S/22E-28C 2 M 7-20-60 5631		--	8.1	422	22 1.10 25	30 2.47 57	17 0.74 17	2 0.05 1	0	203 3.33 75	9 0.19 4	18 0.51 12	24.0 0.39 9	0.2	0.07	50	272	179
-28C 2 M 6-20-62 5631		69	8.4	428	23 1.15 27	27 2.22 51	20 0.87 20	3 0.08 2	3 0.10 2	195 3.20 73	10 0.21 5	18 0.51 12	23.0 0.37 8	0.1	0.06	43	266	169
-28C 2 M 7-11-63 5631		--	8.1	467	23 1.15 24	32 2.63 56	20 0.87 18	3 0.08 2	0	210 3.44 74	12 0.25 5	20 0.56 12	25.0 0.40 9	0.2	0.10	48	287 288	189
13S/23E-7N 2 M 8-13-63 5000		66	8.0	382	42 2.10 54	7 0.58 15	27 1.17 30	2 0.05 1	0	180 2.95 78	17 0.35 9	11 0.31 8	10.0 0.16 4	0.4	0.11	32	237 234	134
13S/23E-30J 1 M 7-24-57 5631		69	7.7	217	10 0.50 21	8 0.66 28	25 1.09 47	3 0.08 3	0	111 1.82 76	10 0.21 9	8 0.23 10	9.5 0.15 6	0.1	0.02	57	185	58
-30J 1 M 6-20-62 5631		68	8.0	218	13 0.65 29	6 0.49 22	24 1.04 46	3 0.08 4	0	106 1.74 79	6 0.12 5	7 0.20 9	8.8 0.14 6	0.4	0.04	55	175	57
-30J 1 M 7-19-63 5631		--	7.8	232	14 0.70 30	6 0.49 21	25 1.09 46	3 0.08 3	0	112 1.84 80	6 0.12 5	6 0.17 7	9.7 0.16 7	0.3	0.08	62	187 184	60
13S/23E-34A 1 M 6- 3-64 5050		67	8.0	809	38 1.90 20	78 6.41 69	21 0.91 10	2 0.05 1	0	469 7.69 85	29 0.60 7	5 0.14 2	40.0 0.65 7	--	0.00	--	444 483	416

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number			Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value										Mineral constituents in parts per million				
Date Sampled Time	Agy. Coll.	Calcium Ca				Magne-sium Mg	Sodium Na	Potas-sium K	Carbon-ate CO ₃	Bicar-bonate HCO ₃	Sulfate SO ₄	Chlo-ride Cl	Ni-trate NO ₃	Fluo-ride F	Boran B	Sili-ca SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃		
14S/14E-16N 1 M 8-12-52 5050		138 6.89 23	169 13.90 46	207 9.00 30	8 0.20 1	0	169 2.77 9	1160 24.15 80	120 3.38 11	0.2	0.5	1.80	--	1888 1930	1040					
14S/16E-6A 1 M 8-27-63 5000		2 0.10 1	0	154 6.70 98	1 0.03	0	184 3.02 43	1 0.02	142 4.00 57	0.5 0.01	0.4	0.18	50	441 447	5					
14S/16E-10J 1 M 8-12-63 5000		19 0.95 10	1 0.08 1	195 8.48 88	3 0.08 1	7 0.23 2	214 3.51 37	57 1.19 13	156 4.40 47	4.9 0.08 1	0.3	0.10	47	596	52					
14S/16E-13H 1 M 8-24-50 5001		--	--	46 2.00	--	--	--	--	35 0.99	--	--	--	--	--	--					
6-4-64 5050		30 1.50 31	3 0.25 5	66 2.87 60	8 0.20 4	0	152 2.49 52	23 0.48 10	66 1.86 39	0.0	--	0.00	--	271 326	88					
14S/16E-23M 1 M 8-12-63 5000		45 2.25 21	6 0.49 5	178 7.74 73	5 0.13 1	0	228 3.74 36	34 0.71 7	211 5.95 57	0.6 0.01	0.2	0.40	52	644 644	137					
14S/16E-25A80 M 7-20-60 5050		8 0.40 4	0	206 8.96 95	3 0.08 1	0	176 2.88 30	3 0.06 1	234 6.60 69	0.4 0.01	0.4	0.83	56	598	20					
14S/16E-36A 1 M 7-20-60 5050		8 0.40 4	0	206 8.96 95	3 0.08 1	0	176 2.88 30	3 0.06 1	234 6.60 69	0.4 0.01	0.4	0.83	56	598	20					
10-18-61 5050		6 0.30 3	0	218 9.48 96	3 0.08 1	6 0.20 2	172 2.82 30	4 0.08 1	228 6.43 67	1.0 0.02	0.3	0.90	57	609	15					
6-20-62 5050		7 0.35 3	1 0.08 1	235 10.22 95	3 0.08 1	2 0.07 1	206 3.38 32	2 0.04	250 7.05 67	0.4 0.01	0.5	1.60	54	658	22					

MINERAL ANALYSES OF GROUND WATER

FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value						Mineral constituents in parts per million							
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
14S/16E-36A 1 M 4-15-64 5050		72	7.8	875	--	--	169 7.35	--	--	--	--	181 5.10	--	--	0.80	--	--	16
14S/17E-9A 1 M 9-7-56 5050		73	8.2	382	35 1.75 46	8 0.66 17	30 1.30 34	5 0.13 3	0	156 2.56 65	15 0.31 8	35 0.99 25	4.3 0.07 2	0.1	0.06	89	298	121
5-28-59 5050		72	7.7	514	--	--	--	36 0.92	0	164 2.69	--	56 1.58	--	--	--	--	--	--
14S/17E-13H 1 M 7-20-60 5050		--	8.2	375	35 1.75 47	13 1.07 29	18 0.78 21	5 0.13 3	0	132 2.16 60	14 0.29 8	37 1.04 29	8.9 0.14 4	0.2	0.06	76	272	141
6-20-62 5641		71	8.2	457	41 2.05 46	16 1.32 29	22 0.96 21	6 0.15 3	0	150 2.46 56	19 0.40 9	48 1.35 31	13.0 0.21 5	0.2	0.07	78	317	169
6-25-63 5631		--	8.0	444	38 1.90 47	14 1.15 28	20 0.87 21	5 0.13 3	0	143 2.34 57	16 0.33 8	42 1.18 29	15.0 0.24 6	0.2	0.08	69	290 311	153
14S/18E-11F 1 M 8-28-63 5000		69	8.0	560	30 1.50 27	24 1.97 36	43 1.87 34	6 0.15 3	0	212 3.47 64	24 0.50 9	38 1.07 20	23.0 0.37 7	0.2	0.15	75	368 371	174
14S/18E-16Q 1 M 8-12-63 5000		71	7.3	471	42 2.10 44	20 1.64 34	20 0.87 18	7 0.18 4	0	170 2.79 60	16 0.33 7	45 1.27 27	16.0 0.26 6	0.3	0.10	75	325	187
14S/18E-24D 1 M 8-12-63 5000		71	7.7	339	29 1.45 42	13 1.07 31	18 0.78 22	7 0.18 5	0	154 2.52 74	6 0.12 4	17 0.48 14	17.0 0.27 8	0.2	0.00	76	259	126
14S/18E-25A 1 M 6-12-63 5050		68	8.0	450	38 1.90 41	16 1.32 29	29 1.26 27	6 0.15 3	0	193 3.16 70	11 0.23 5	33 0.93 21	13.0 0.21 5	0.3	0.20	64	305 293	161

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	H p	Specific conductance (micro-mhos. at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Barium Ba	Silica SiO ₂	TDS Computed Evap 180° C CaCO ₃	TOTAL hardness as CaCO ₃
14S/18E-26N 1 M 7-24-57 5000		71	7.5	640	51 2.54 39	22 1.81 28	47 2.04 31	0.15 2	0	239 3.92 59	25 0.52 8	70 1.97 30	15.0 0.24 4	0.0	0.26	70	424	218
-26N 1 M 7-20-60 5050		68	7.6	654	56 2.79 42	23 1.89 29	41 1.78 27	0.13 2	0	256 4.20 65	17 0.35 5	63 1.78 27	11.0 0.18 3	0.2	0.07	69	411	234
-26N 1 M 7-30-62 5050		70	8.1	857	38 1.90 20	59 4.85 52	57 2.48 26	0.18 2	0	308 5.05 55	31 0.65 7	105 2.96 33	27.0 0.44 5	0.1	0.00	71	547 567	338
-26N 1 M 8-13-63 5050		--	--	559	--	--	41 1.78	--	--	--	--	60 1.69	--	--	0.10	--	175	
14S/19E-7M 1 M 7-29-58 5631		--	8.3	438	46 2.30 50	14 1.15 25	23 1.00 22	0.18 4	8 0.27 6	220 3.61 78	9 0.19 4	15 0.42 9	7.2 0.12 3	0.2	0.04	84	322	173
-7M 1 M 7-20-60 5050		69	8.4	431	38 1.90 42	18 1.48 32	24 1.04 23	0.15 3	4 0.13 3	230 3.77 81	7 0.15 3	16 0.45 10	8.4 0.14 3	0.1	0.07	85	320	169
-7M 1 M 6-20-62 5641		71	8.4	496	42 2.10 40	21 1.73 33	28 1.22 23	0.18 3	4 0.13 2	263 4.31 83	8 0.17 3	15 0.42 8	11.0 0.18 3	0.1	0.11	77	343	192
-7M 1 M 6-13-63 5050		--	8.0	503	44 2.20 41	21 1.73 32	30 1.30 24	0.18 3	0	276 4.52 86	9 0.19 4	13 0.37 7	12.0 0.19 4	0.1	0.04	74	346 318	197
14S/19E-14P 1 M 10-24-62 5050		68	7.9	290	13 0.65 24	8 0.66 25	30 1.30 48	0.08 3	0	101 1.66 64	20 0.42 16	7 0.20 8	20.0 0.32 12	0.1	0.00	34	185 182	66
-14P 1 M 6-13-63 5050		--	7.4	261	12 0.60 24	7 0.58 23	28 1.22 49	0.08 3	0	104 1.70 71	9 0.19 8	8 0.23 10	16.0 0.26 11	0.1	0.08	47	181 179	59

SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	H _p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					TOTAL hardness as CaCO ₃
Date Sampled Time	Agy. Coll.				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180°C	
14S/19E-20M 2 M 6-12-63 5050		--	7.7	331	24 1.20 37	11 0.90 28	22 0.96 30	7 0.18 6	0	134 2.20 70	8 0.17 5	19 0.54 17	15.0 0.24 8	0.1	0.07	74	246 250	105
14S/19E-28P 1 M 6-26-63 5050		68	8.0	1040	98 4.89 47	32 2.63 25	61 2.65 25	13 0.33 3	0	474 7.77 77	21 0.44 4	66 1.86 18	3.9 0.06 1	0.1	0.14	73	601 603	376
14S/19E-29A 1 M 6-26-63 5050		65	8.2	928	74 3.69 36	41 3.37 33	68 2.96 29	11 0.28 3	0	527 8.64 84	14 0.29 3	49 1.38 13	0.8 0.01	0.1	0.27	67	584 565	353
14S/19E-31A 1 M 4-30-52 5050		70	7.7	594	50 2.50 43	23 1.89 32	31 1.35 23	5 0.13 2	0	222 3.64 62	15 0.31 5	60 1.69 29	15.0 0.24 4	0.0	0.00	67	375	220
-31A 1 M 6-12-63 5050		69	7.3	851	78 3.89 42	41 3.37 36	41 1.78 19	10 0.26 3	0	368 6.03 66	9 0.19 2	94 2.65 29	14.0 0.23 3	0.2	0.09	68	536 590	363
14S/20E-20 1 M 6-10-64 5050		73	7.7	391	28 1.40 35	19 1.56 39	20 0.87 22	5 0.13 3	0	189 3.10 79	6 0.12 3	13 0.37 9	20.0 0.32 8	--	0.00	--	204 266	148
14S/20E-30 2 M 8-27-59 5060		--	7.7	--	23 1.15 36	13 1.07 33	19 0.83 26	6 0.15 5	0	148 2.43 76	7 0.15 5	11 0.31 10	19.9 0.32 10	0.0	--	--	172	111
-30 2 M 6-9-64 5050		72	7.7	348	26 1.30 37	14 1.15 33	20 0.87 25	6 0.15 4	0	157 2.57 77	7 0.15 4	12 0.34 10	18.0 0.29 9	--	0.10	--	180 241	123
14S/20E-30 1 M 6-13-63 5050		74	7.9	395	32 1.60 41	14 1.15 29	24 1.04 26	6 0.15 4	0	173 2.84 73	8 0.17 4	17 0.48 12	24.0 0.39 10	0.2	0.13	77	287 260	138
14S/20E-50 1 M 8-27-57 5060		--	7.4	--	21 1.05 35	13 1.07 36	17 0.74 25	5 0.13 4	0	134 2.20 79	6 0.12 4	9 0.25 9	12.4 0.20 7	0.1	--	--	149	106

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number			Temp when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value										Mineral constituents in parts per million				
Date Sampled, Time	Agg. Coll.	Calcium Ca				Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Baron B	Silica SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃		
14S/20E-5H 1 M 6-10-64 5050		21 1.05 36	12 0.99 34	17 0.74 25	5 0.13 4	0	132 2.16 77	7 0.15 5	9 0.25 9	14.0 0.23 8	--	0.00	--	151 224	102					
14S/20E-8A 1 M 5-2-47 5702		38 1.90 41	19 1.56 34	24 1.04 22	5 0.13 3	0	212 3.47 74	15 0.31 7	29 0.82 17	5.8 0.09 2	0.1	0.04	68	308	173					
-8A 1 M 10-19-51 5000		19 0.95 32	13 1.07 37	19 0.83 28	3 0.08 3	0	138 2.26 79	4 0.08 3	10 0.28 10	15.0 0.24 8	--	0.00	73	224	101					
-8A 1 M 4-15-59 5050		33 1.65 39	18 1.48 35	21 0.91 22	7 0.18 4	0	173 2.84 69	13 0.27 7	18 0.51 12	32.0 0.52 13	0.2	0.07	76	303	157					
-8A 1 M 7-16-63 5050		55 2.74 51	15 1.23 23	27 1.17 22	8 0.20 4	0	215 3.52 67	17 0.35 7	26 0.73 14	41.0 0.66 13	0.2	0.07	74	369 374	199					
14S/20E-9N 1 M 5-12-52 5050		30 1.50 37	16 1.32 33	24 1.04 26	7 0.18 4	0	162 2.66 66	15 0.31 8	24 0.68 17	25.0 0.40 10	0.0	0.00	78	299	141					
-9N 1 M 8-27-57 5060		31 1.55 37	16 1.32 32	26 1.13 27	6 0.15 4	0	158 2.59 65	13 0.27 7	24 0.68 17	27.4 0.44 11	0.0	--	--	221	144					
-9N 1 M 4-15-59 5050		34 1.70 39	16 1.32 30	28 1.22 28	6 0.15 3	0	180 2.95 67	17 0.35 8	24 0.68 15	28.0 0.45 10	0.1	0.10	73	315	151					
14S/20E-10M 1 M 5-2-47 5702		31 1.55 39	17 1.40 35	22 0.96 24	4 0.10 2	0	183 3.00 75	6 0.12 3	28 0.79 20	6.0 0.10 2	--	--	62	266 300	148					
-10M 1 M 8-30-51 5050		28 1.40 35	17 1.40 35	25 1.09 27	6 0.15 4	10 0.33 8	167 2.74 67	9 0.19 5	20 0.56 14	16.0 0.26 6	0.0	0.02	80	293	140					

MINERAL ANALYSES OF GROUND WATER

FRESNO - MADERA AREA

State Well Number		Temp. when Sampled ° F	H p	Specific conduct- once (micro- mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reounce value								Mineral constituents in parts per million					
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180 ° C	TOTAL hardness as CaCO ₃
14S/20E-10M 1 M 10-17-51 5000		--	7.6	378	28 1.40 36	17 1.40 36	23 1.00 25	5 0.13 3	0	172 2.82 73	9 0.19 5	18 0.51 13	22.0 0.35 9	0.0	0.50	80	287	140
14S/20E-14F 1 M 10-17-51 5200		--	7.8	347	27 1.35 38	15 1.23 35	19 0.83 24	4 0.10 3	0	172 2.82 79	8 0.17 5	13 0.37 10	14.0 0.23 6	--	0.54	67	252	129
6-10-64 1 M 5050		73	7.8	340	26 1.30 38	16 1.32 38	17 0.74 21	4 0.10 3	0	158 2.59 78	6 0.12 4	11 0.31 9	20.0 0.32 10	--	0.00	--	178 244	131
14S/20E-15M 1 M 10-17-51 5000		--	7.7	277	21 1.05 35	14 1.15 39	15 0.65 22	5 0.13 4	0	151 2.47 85	4 0.08 3	7 0.20 7	9.8 0.16 5	0.0	0.57	78	229 219	110
5-16-63 1 M 5050		73	8.1	367	29 1.45 40	15 1.23 34	19 0.83 23	6 0.15 4	0	169 2.77 78	8 0.17 5	16 0.45 13	11.0 0.18 5	0.1	0.05	73	260 273	134
14S/20E-19A 1 M 7-17-63 5050		--	7.7	672	81 4.04 59	18 1.48 22	27 1.17 17	7 0.18 3	0	283 4.64 69	18 0.37 5	48 1.35 20	25.0 0.40 6	0.2	0.08	74	437 437	276
14S/20E-34R 2 M 8-22-63 5000		--	8.1	511	42 2.10 41	21 1.73 34	27 1.17 23	4 0.10 2	0	212 3.47 68	10 0.21 4	40 1.13 22	16.0 0.26 5	0.2	0.05	36	300 303	192
14S/21E- 6E 1 M 11-19-62 5060		--	8.3	--	33 1.65 38	18 1.48 34	25 1.09 25	7 0.18 4	--	204 3.34 75	13 0.27 6	15 0.42 9	25.3 0.41 9	0.1	--	--	237 289	157
5-16-63 1 M 5050		73	--	--	--	--	--	--	--	--	--	--	26.0 0.42	--	--	--	--	--
10-29-63 1 M 5050		--	7.5	359	26 1.30 35	16 1.32 36	22 0.96 26	4 0.10 3	0	169 2.77 78	9 0.19 5	11 0.31 9	16.0 0.26 7	0.1	0.06	63	250 261	131

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
14S/21E-9R 1 M 5-28-63 5050		71	8.3	452	39 1.95 40	21 1.73 36	25 1.09 23	2 0.05 1	0	219 3.59 77	15 0.31 7	15 0.42 9	21.0 0.34 7	0.1	0.05	47	293 276	184
14S/21E-13B 1 M 9-7-56 5050		--	7.3	599	31 1.55 25	33 2.71 44	43 1.87 30	3 0.08 1	0	213 3.49 57	79 1.64 27	23 0.65 11	21.0 0.34 6	0.0	0.01	68	406	213
14S/21E-23F 1 M 6-4-64 5050		--	8.4	434	30 1.50 34	19 1.56 35	30 1.30 29	3 0.08 2	4 0.13 3	196 3.21 73	24 0.50 11	12 0.34 8	12.0 0.19 4	--	0.00	--	230 275	153
14S/21E-27R 1 M 7-24-57 5050		69	7.5	469	38 1.90 39	19 1.56 32	30 1.30 27	4 0.10 2	0	226 3.70 74	23 0.48 10	21 0.59 12	13.0 0.21 4	0.0	0.05	60	319	173
14S/21E-30N 1 M 6-13-63 5050		--	7.9	381	31 1.55 40	16 1.32 34	21 0.91 24	3 0.08 2	0	162 2.66 70	7 0.15 4	24 0.68 18	19.0 0.31 8	0.3	0.24	40	241 250	144
14S/21E-34J 1 M 9-7-56 5050		--	7.6	281	22 1.10 37	11 0.90 31	20 0.87 29	3 0.08 3	0	134 2.20 75	9 0.19 6	14 0.39 13	10.0 0.16 5	0.1	0.00	49	204	100
14S/22E-1B 1 M 7-21-60 5050		68	8.0	242	21 1.05 43	9 0.74 30	15 0.65 26	1 0.03 1	0	102 1.67 67	22 0.46 18	7 0.20 8	11.0 0.18 7	0.2	0.06	49	185	90
14S/22E-4R 1 M 9-7-56 5050		--	8.1	270	18 0.90 30	15 1.23 42	18 0.78 26	2 0.05 2	0	160 2.62 88	7 0.15 5	5 0.14 5	4.3 0.07 2	0.0	0.00	47	195	107
14S/22E-9P 2 M 6-4-64 5050		79	7.9	256	22 1.10 39	10 0.82 29	20 0.87 31	2 0.05 2	0	140 2.29 84	7 0.15 5	6 0.17 6	7.2 0.12 4	--	0.00	--	143 175	96
14S/23E-3G 1 M 6-4-64 5050		70	7.0	192	20 1.00 52	8 0.58 30	7 0.30 16	1 0.03 2	0	92 1.51 79	10 0.21 11	4 0.11 6	5.0 0.08 4	--	0.00	--	99 114	79

MINERAL ANALYSES OF GROUND WATER

FRESNO - MADERA AREA

State Well Number	Date Sampled Time	Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					TOTAL hardness as CaCO ₃
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlor- ide Cl	Ni- trate NO ₃	Fluor- ide F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180 °C	
14S/23E-8D 1 M 8-13-63 5000		68	7.3	215	16 0.80 41	10 0.82 42	7 0.30 15	2 0.05 3	0	95 1.56 78	7 0.15 8	5 0.14 7	9.6 0.15 8	0.0	0.00	26	129	81
14S/23E-20F 2 M 8-4-59 5050		76	8.1	191	--	--	--	--	0	108 1.77	--	2 0.06	--	--	--	--	--	74
14S/23E-33C 1 M 9-15-58 5050		70	7.9	367	34 1.70 49	13 1.07 31	14 0.61 18	3 0.08 2	0	114 1.87 54	44 0.92 26	6 0.17 5	32.0 0.52 15	0.2	0.05	13	215	139
14S/24E-9P 3 M 6-4-64 5050		76	7.6	349	32 1.60 46	13 1.07 31	16 0.70 20	3 0.08 2	0	161 2.64 78	8 0.17 5	8 0.23 7	22.0 0.35 10	--	0.00	--	181 226	134
14S/24E-14B 1 M 7-21-60 5050		65	7.8	239	20 1.00 44	10 0.82 36	9 0.39 17	2 0.05 2	0	75 1.23 52	32 0.67 28	5 0.14 6	21.0 0.34 14	0.1	0.05	29	165	91
14S/24E-36L 1 M 8-8-63 5000		70	7.5	447	38 1.90 40	17 1.40 30	31 1.35 29	3 0.08 2	0	218 3.57 76	11 0.23 5	14 0.39 8	30.0 0.48 10	0.2	0.60	50	302	165
15S/17E-14G 1 M 2-4-53 5050		--	7.7	542	33 1.65 33	9 0.74 15	59 2.57 51	4 0.10 2	0	140 2.29 46	14 0.29 6	86 2.43 48	0.4 0.01	0.1	0.00	53	327	120
4-20-54 5050		74	7.7	2500	203 10.13 48	43 3.54 17	167 7.26 34	10 0.26 1	0	164 2.69 13	27 0.56 3	620 17.48 84	2.6 0.04	0.1	0.26	62	1216	684
9-29-55 5050		--	--	5590	--	--	602 26.17	--	--	--	--	1790 50.48	--	--	--	--	--	1300
10-18-55 5050		71	--	8520	--	--	946 41.13	--	--	--	--	2700 76.14	--	--	2.70	--	--	2100

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp when Sampled °F	pH	Specific conductance (microhmhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					
					Calcium	Magnesium	Sodium	Potassium	Carbonate	Bicarbonate	Sulfate	Chloride	Nitrate	Fluoride	Barium	Silica	IDS Computed	TOTAL hardness as CaCO ₃
Date Sampled Time	Avg. Coll.				Ca	Mg	Na	K	CO ₃	HCO ₃	SO ₄	Cl	NO ₃	F	B	SiO ₂	Evap 180° C	CoCO ₃
15S/17E-14G 1 M 9-27-56 5050		70	--	397	--	--	80 3.48	--	--	--	--	59 1.66	--	--	0.08	--	--	11
8- 6-57 5050	-14G 1 M	62	7.5	413	3 0.15 4	1 0.08 2	80 3.48 91	4 0.10 3	0	128 2.10 54	4 0.08 2	60 1.69 43	1.0 0.02 1	0.2	0.04	66	282	12
7-30-58 5050	-14G 1 M	89	8.5	456	7 0.35 8	0	90 3.91 90	4 0.10 2	8 0.27 6	138 2.26 51	2 0.04 1	64 1.80 41	1.0 0.02	0.3	0.16	66	310	18
7-13-59 5050	-14G 1 M	105	7.4	645	13 0.65 11	3 0.25 4	112 4.87 83	4 0.10 2	--	133 2.18 37	4 0.08 1	127 3.58 61	0.3	0.4	0.01	60	389	45
7-21-60 5050	-14G 1 M	--	8.1	885	31 1.55 19	6 0.49 6	136 5.91 73	4 0.10 1	0	116 1.90 24	4 0.08 1	215 6.06 75	0.6 0.01	0.4	0.20	64	518	102
8-22-63 5000	-14G 1 M	--	8.0	855	23 1.15 15	2 0.16 2	141 6.13 81	5 0.13 2	0	138 2.26 30	3 0.06 1	186 5.25 69	0.3	0.4	0.16	41	470 479	66
15S/17E-15H 1 M 4-20-54 5050		--	8.1	1090	12 0.60 6	2 0.16 2	217 9.44 91	5 0.13 1	0	244 4.00 38	24 0.50 5	212 5.98 57	0.4 0.01	0.3	0.77	67	660	38
10-18-55 5050	-15H 1 M	73	--	1070	--	--	214 9.30	--	--	--	--	192 5.41	--	--	1.40	--	--	35
7-31-58 5050	-15H 1 M	74	8.0	1080	12 0.60 6	1 0.08 1	214 9.30 92	5 0.13 1	0	252 4.13 40	24 0.50 5	202 5.70 55	0.1	0.4	1.80	67	651	34
7-13-59 5050	-15H 1 M	72	7.4	1090	10 0.50 5	1 0.08 1	222 9.65 93	4 0.10 1	0	248 4.06 40	26 0.54 5	198 5.58 55	0.7 0.01	0.6	2.00	61	647	29

SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
 FRESNO - MADERA AREA

State Well Number			Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
						Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Baron B	Silica SiO ₂	TDS Computed Evap 180°C	TOTAL hardness as CaCO ₃
15S/17E-15H 1 M 7-19-60 5050			73	8.4	1007	11 0.55 5	0	216 9.39 93	5 0.13 1	6 0.20 2	235 3.85 40	12 0.25 2	201 5.67 56	0.7 0.01	0.4	1.40	67	642	28
15S/18E-16G 1 M 8-13-53 5050			73	7.8	333	22 1.10 33	7 0.58 17	35 1.52 45	7 0.18 5	0	136 2.23 68	6 0.12 4	28 0.79 24	8.2 0.13 4	0.1	0.04	77	257	84
-16G 1 M 5-24-54 5050			--	--	338	--	--	--	--	--	--	6 0.12	29 0.82	--	--	--	--	--	--
-16G 1 M 7-28-55 5050			74	--	362	--	--	40 1.74	--	--	--	--	32 0.90	--	--	--	--	--	86
-16G 1 M 8- 6-57 5050			74	7.3	333	22 1.10 33	6 0.49 15	36 1.57 47	7 0.18 5	0	137 2.25 69	7 0.15 5	27 0.76 23	7.7 0.12 4	0.1	0.00	75	255	80
-16G 1 M 7-13-59 5050			74	8.1	346	25 1.25 37	5 0.41 12	35 1.52 45	7 0.18 5	0	142 2.33 70	6 0.12 4	27 0.76 23	8.3 0.13 4	0.2	0.09	70	253	83
-16G 1 M 7-19-60 5050			72	8.2	326	25 1.25 38	4 0.33 10	35 1.52 46	7 0.18 5	0	140 2.29 71	5 0.10 3	25 0.71 22	7.9 0.13 4	0.2	0.07	74	252	79
-16G 1 M 7-30-62 5050			74	8.3	349	25 1.25 35	6 0.49 14	38 1.65 46	7 0.18 5	5 0.17 5	144 2.36 67	4 0.08 2	25 0.71 20	13.0 0.21 6	0.0	0.00	34	278 281	87
-16G 1 M 6-11-63 5631			--	--	377	--	--	27 1.17	--	--	--	8 0.17	27 0.76	--	--	0.07	--	--	113
15S/18E-20G 1 M 8-13-53 5050			73	7.8	372	20 1.00 29	2 0.16 5	48 2.09 61	7 0.18 5	0	136 2.23 63	9 0.19 5	38 1.07 30	4.3 0.07 2	0.2	0.04	70	265	58

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	H _p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					TOTAL hardness as CaCO ₃
Date Sampled Time	Agy. Coll.				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180° C	
15S/18E-20G 1 M 5-24-54 5001		--	--	377	--	--	--	--	--	8	42 1.18	--	--	--	--	--	--	62
-20G 1 M 7-28-55 5050		73	--	389	--	--	55 2.39	--	--	--	42 1.18	--	--	--	--	--	--	63
-20G 1 M 8- 6-57 5050		72	7.5	385	20 1.00 26	3 0.25 7	54 2.35 62	8 0.20 5	0	139 2.28 62	7 0.15 4	42 1.18 32	4.7 0.08 2	0.2	0.03	71	278	63
-20G 1 M 2-18-58 5001		--	--	403	--	--	--	--	--	--	42 1.18	--	--	--	--	--	--	63
-20G 1 M 7-13-59 5050		74	8.1	402	22 1.10 29	3 0.25 7	53 2.30 60	7 0.18 5	0	143 2.34 61	9 0.19 5	43 1.21 32	5.5 0.09 2	0.3	0.06	64	277	68
-20G 1 M 7-19-60 5050		70	8.1	389	23 1.15 30	3 0.25 6	53 2.30 59	7 0.18 5	0	140 2.29 61	8 0.17 5	42 1.18 32	5.5 0.09 2	0.3	0.14	69	280	70
15S/18E-36A 1 M 8-14-63 5000		71	8.0	340	25 1.25 35	7 0.58 16	36 1.57 44	7 0.18 5	0	153 2.51 73	11 0.23 7	18 0.51 15	13.0 0.21 6	0.2	0.00	59	251	92
15S/19E-15C 1 M 8-14-63 5000		68	7.6	758	78 3.97 40	21 3.33 34	50 2.17 22	13 0.37 4	0	331 6.91 75	32 0.65 7	56 1.55 15	16.0 0.30 3	0.1	0.00	70	549	190
15S/19E-22M 1 M 8-29-63 5000		--	8.0	547	54 2.69 50	12 0.99 18	36 1.57 29	7 0.18 3	0	198 3.25 61	26 0.54 10	51 1.44 27	5.7 0.09 2	0.2	0.07	47	336 342	184
15S/19E-25A 1 M 6- 4-64 5050		71	8.2	386	35 1.75 48	3 0.25 7	33 1.43 40	7 0.18 5	0	128 2.10 58	26 0.54 15	30 0.85 24	7.1 0.11 3	--	0.00	--	204 255	100

MINERAL ANALYSES OF GROUND WATER

FRESNO - MADERA AREA

State Well Number		Temp when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					TOTAL hardness as CaCO ₃
Date Sampled Time	Agy. Cal.				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Barium Ba	Silica SiO ₂	TDS Computed Evap 180°C	
15S/19E-26F 1 M 6-4-64 5050		--	8.4	197	8 0.40 19	1 0.08 4	35 1.52 72	4 0.10 5	0	106 1.74 87	4 0.08 4	4 0.11 6	3.5 0.06 3	--	0.00	--	112 154	24
15S/19E-28E 1 M 8-14-63 5000		74	7.6	286	19 0.95 32	4 0.33 11	34 1.48 50	7 0.18 6	0	120 1.97 69	9 0.19 7	17 0.48 17	13.0 0.21 7	0.3	0.00	66	228	64
15S/20E-6L 1 M 8-14-63 5000		67	7.8	584	49 2.45 39	24 1.97 31	42 1.83 29	3 0.08 1	0	288 4.72 75	17 0.35 6	27 0.76 12	29.0 0.47 7	0.3	0.20	50	383	221
15S/20E-10D 3 M 7-30-58 5050		72	8.1	614	41 2.05 31	26 2.14 32	54 2.35 35	3 0.08 1	0	324 5.31 81	9 0.19 3	35 0.99 15	3.5 0.06 1	0.1	0.12	55	386	210
-10D 3 M 7-21-60 5050		--	8.4	501	51 2.54 47	23 1.89 35	20 0.87 16	3 0.08 1	5 0.17 3	215 3.52 67	22 0.46 9	24 0.68 13	26.0 0.42 8	0.2	0.10	53	333	222
15S/20E-31K 1 M 9-8-56 5050		70	8.0	372	39 1.95 52	5 0.41 11	30 1.30 35	3 0.08 2	0	157 2.57 67	12 0.25 6	30 0.85 22	11.0 0.18 5	0.1	0.10	30	237	118
15S/20E-36H 1 M 9-9-56 5050		67	--	547	21 1.05 19	15 1.23 23	71 3.09 57	3 0.08 1	0	187 3.06 55	31 0.65 12	51 1.44 26	23.0 0.37 7	0.1	0.14	39	346	114
15S/21E-2K 1 M 6-15-64 5050		70	8.0	383	28 1.40 36	9 0.74 19	37 1.61 42	4 0.10 3	0	168 2.75 73	18 0.37 10	21 0.59 16	2.4 0.04 1	--	0.00	--	202 238	107
15S/21E-3D 1 M 5-21-52 5050		66	7.4	139	9 0.45 32	5 0.41 29	11 0.48 35	2 0.05 4	0	74 1.21 86	6 0.12 9	1 0.03 2	3.0 0.05 4	0.0	0.03	40	113	43
-3D 1 M 7-22-59 5050		68	8.0	384	-- -- --	-- -- --	-- -- --	-- -- --	0	84 1.38 --	-- -- --	16 0.45 --	-- -- --	--	--	--	--	139

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
15S/21E-17F 1 M 6-15-64 5050		70	7.9	834	70 3.49 39	18 1.48 17	88 3.83 43	0.13 0.13 1	5	0	362 5.93 68	52 1.08 12	36 1.02 12	39.0 0.63 7	--	0.10	486 524	249
15S/21E-24L 1 M 7-21-60 5050		78	8.3	510	39 1.95 37	11 0.90 17	53 2.30 44	0.08 0.08 2	3	0	205 3.36 65	26 0.54 10	34 0.96 18	21.0 0.34 7	0.2	0.11	327	143
-24L 1 M 8-12-63 5050		73	8.2	550	41 2.05 39	10 0.82 16	53 2.30 44	0.10 0.10 2	4	0	219 3.59 66	29 0.60 11	33 0.93 17	19.0 0.31 6	0.2	0.07	335 339	144
15S/21E-32R 1 M 9- 9-56 5050		68	8.2	533	14 0.70 13	13 1.07 20	83 3.61 66	0.10 0.10 2	4	0	222 3.64 66	21 0.44 8	42 1.18 21	16.0 0.26 5	0.1	0.11	335	89
15S/22E- 1J 1 M 6-12-64 5050		68	7.2	138	12 0.60 47	3 0.25 19	9 0.39 30	0.05 0.05 4	2	0	61 1.00 79	6 0.12 10	3 0.08 6	3.5 0.06 5	--	0.00	68 112	43
15S/22E- 3D80 M 7-21-59 5050		--	7.8	208	--	--	--	--	--	0	60 0.98	--	2 0.06	--	--	--	74	
15S/22E-10H 1 M 6-15-64 5050		63	7.7	62	6 0.30 52	1 0.08 14	4 0.17 29	0.03 0.03 5	1	0	32 0.52 87	2 0.04 7	1 0.03 5	0.8 0.01 2	--	0.00	32 70	19
15S/22E-33G 1 M 8-21-63 5000		--	8.4	731	72 3.59 47	14 1.15 15	64 2.78 36	0.10 0.10 1	4	8 0.27 4	246 4.03 54	41 0.85 11	69 1.95 26	26.0 0.42 6	0.2	0.10	473	237
15S/23E-33C80 M 7-22-59 5050		--	8.2	449	--	--	--	--	--	0	196 3.21	--	16 0.45	--	--	--	136	
15S/24E- 3A 1 M 6- 4-64 5050		69	7.9	319	24 1.20 39	9 0.74 24	25 1.09 35	0.05 0.05 2	2	0	131 2.15 70	7 0.15 5	11 0.31 10	28.0 0.45 15	--	0.00	170 213	97

MINERAL ANALYSES OF GROUND WATER

FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
15S/24E-7Q 1 M 8-13-63 5000		68	7.5	385	37 1.85 47	14 1.15 29	20 0.87 22	0.05 1	0	168 2.75 70	16 0.33 8	14 0.39 10	27.0 0.44 11	0.2	0.00	62	275	150
15S/24E-10L 1 M 8-20-63 5000		69	7.6	556	50 2.50 45	20 1.64 29	31 1.35 24	3 0.08 1	0	235 3.85 69	29 0.60 11	23 0.65 12	32.0 0.52 9	0.2	0.00	58	362	207
15S/24E-20A 1 M 11-18-63 5000		62	7.8	270	24 1.20 44	10 0.82 30	15 0.65 24	2 0.05 2	0	121 1.98 73	13 0.27 10	9 0.25 9	13.0 0.21 8	--	0.20	--	146 185	101
15S/24E-23K 1 M 3-23-60 5050		--	--	--	--	--	--	--	--	--	--	--	--	--	0.08	--	--	--
-23K 1 M 10-24-62 5050		69	8.1	289	27 1.35 45	8 0.66 22	22 0.96 32	2 0.05 2	0	127 2.08 71	5 0.10 3	16 0.45 15	19.0 0.31 11	0.2	0.05	58	220 221	101
-23K 1 M 8-23-63 5050		72	7.9	313	27 1.35 45	8 0.66 22	21 0.91 31	2 0.05 2	0	128 2.10 71	4 0.08 3	16 0.45 15	20.0 0.32 11	0.2	0.06	59	220 228	101
15S/24E-33R80 M 7-21-60 5050		--	8.5	507	32 1.60 29	20 1.64 30	52 2.26 41	1 0.03 1	6 0.20 4	249 4.08 74	21 0.44 8	17 0.48 9	20.0 0.32 6	0.2	0.09	--	292	162
15S/24E-36M 1 M 6-4-64 5050		68	8.0	653	68 3.39 49	25 2.06 30	31 1.35 20	3 0.08 1	0	284 4.65 69	32 0.67 10	38 1.07 16	23.0 0.37 5	--	0.00	--	360 376	273
16S/16E-20N 1 M 7-21-60 5050		--	7.7	2010	147 7.34 29	150 12.34 49	125 5.44 22	2 0.05	0	196 3.21 13	915 19.05 76	59 1.66 7	62.0 1.00 4	0.1	1.10	45	1603	985
16S/16E-28M 1 M 8-16-51 5050		--	7.5	1721	--	--	176 7.65	--	--	124 2.03	760 15.82	60 1.69	--	--	1.40	--	--	615

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Baron B	Sili- ca SiO ₂	IDS Computed Evap 180°C	TOTAL hardness as CaCO ₃
16S/18E-2C 1 M 8-14-63 5000		72	7.9	206	12 0.60 27	2 0.16 7	30 1.30 59	5 0.13 6	0	109 1.79 87	1 0.02 1	6 0.17 8	5.1 0.08 4	0.3	0.00	63	178	38
16S/18E-4N 1 M 8-27-63 5000		72	7.5	172	5 0.25 15	0	32 1.39 81	3 0.08 5	0	92 1.51 90	3 0.06 4	4 0.11 7	0.1	0.4	0.02	68	161 172	13
16S/18E-10A 1 M 6-19-62 5050		73	8.0	185	10 0.50 28	1 0.08 4	26 1.13 63	3 0.08 4	0	94 1.54 88	4 0.08 5	4 0.11 6	1.1 0.02 1	0.3	0.03	42	138	29
-10A 1 M 8-12-63 5050		78	7.6	177	10 0.50 28	1 0.08 5	25 1.09 62	4 0.10 6	0	95 1.56 90	2 0.04 2	4 0.11 6	1.4 0.02 1	0.3	0.03	39	133 137	29
16S/18E-15L 1 M 8-10-63 5000		71	8.1	169	13 0.65 38	1 0.08 5	22 0.96 56	1 0.03 2	0	88 1.44 84	5 0.10 6	6 0.17 10	0.0	--	--	--	91	37
16S/18E-18A 1 M 8-27-63 5000		67	8.0	334	26 1.30 40	1 0.08 2	42 1.83 56	1 0.03 1	0	153 2.51 77	16 0.33 10	15 0.42 13	0.3	0.1	0.02	36	213 215	69
16S/18E-24A 1 M 8-10-63 5000		73	8.0	161	13 0.65 39	2 0.16 10	18 0.78 47	3 0.08 5	0	85 1.39 80	7 0.15 9	7 0.20 11	0.0	--	--	--	92	41
16S/18E-26A 2 M 8-29-63 5000		70	7.6	1150	77 3.84 36	2 0.16 1	154 6.70 62	2 0.05	0	143 2.34 22	130 2.71 26	196 5.53 52	0.6 0.01	0.1	0.08	31	663 679	200
16S/18E-27R80 M 3-27-56 5050		--	7.9	582	32 1.60 26	2 0.16 3	98 4.26 70	1 0.03	0	269 4.41 73	28 0.58 10	38 1.07 18	0.1	0.2	0.11	--	332	88
16S/18E-35Q 2 M 3-28-56 5050		--	8.1	658	30 1.50 21	1 0.08 1	126 5.48 77	1 0.03	0	375 6.15 84	44 0.92 13	10 0.28 4	0.1	0.1	0.18	24	421	79

SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number			Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
						Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	SiO ₂	TDS Computed Evap 180°C	TOTAL hardness as CaCO ₃
16S/18E-35Q 2 M 8- 5-59 5050			--	7.7	421	30 1.50 39	0	54 2.35 61	0.03 1	0	113 1.85 47	38 0.79 20	44 1.24 32	1.8 0.03 1	0.2	0.02	25	250	75
16S/19E- 30 1 M 8-29-63 5000			73	7.9	464	47 2.35 55	4 0.33 8	35 1.52 35	4 0.10 2	0	117 1.92 45	24 0.50 12	50 1.41 33	24.0 0.39 9	0.1	0.06	31	277 287	134
16S/19E- 5P 1 M 6- 4-64 5050			73	8.1	359	35 1.75 52	4 0.33 10	27 1.17 35	5 0.13 4	0	98 1.61 49	19 0.40 12	40 1.13 35	7.2 0.12 4	--	0.00	--	238	104
16S/19E- 7E 1 M 5-27-54 5000			70	7.8	394	35 1.75	7 0.58	41 1.78	2 0.05	0	134 2.20	20 0.42	36 1.02	--	--	--	--	--	117
16S/19E- 8R 1 M 8-14-63 5000			--	8.0	246	24 1.20 51	1 0.08 3	23 1.00 42	3 0.08 3	0	98 1.61 70	11 0.23 10	16 0.45 20	0.3	0.1	0.00	39	166	64
16S/19E-24R 1 M 9- 8-56 5050			72	7.9	141	8 0.40 27	1 0.08 5	22 0.96 65	1 0.03 2	0	82 1.34 89	2 0.04 3	3 0.08 5	3.1 0.05 3	0.0	0.03	30	110	24
8- 5-59 5050			74	7.9	146	--	--	--	--	0	69 1.13	--	--	--	--	--	--	--	24
16S/20E- 2P 1 M 6- 4-64 5050			71	8.2	450	41 2.05 45	10 0.82 18	36 1.57 35	3 0.08 2	0	182 2.98 69	18 0.37 9	25 0.71 16	18.0 0.29 7	--	0.00	--	275	144
16S/20E-18G 1 M 11- 7-61 5060			--	9.3	--	1 0.05 4	0	28 1.22 94	1 0.03 2	5 0.13 10	59 0.97 78	2 0.04 3	3 0.08 6	0.9 0.02 2	0.3	--	--	73 99	3
8-16-63 5000			75	7.4	134	3 0.15 11	0	28 1.22 87	1 0.03 2	0	71 1.16 90	3 0.06 5	2 0.06 5	0.5 0.01 1	0.3	0.03	17	90 92	8

TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactivity value										Mineral constituents in parts per million				
					Calcium	Magnesium	Sodium	Potassium	Carbonate	Bicarbonate	Sulfate	Chloride	Nitrate	Fluoride	Boron	Silica	TDS Computed	TOTAL hardness as CaCO ₃	
Date Sampled Time	Agy. Coll.				Ca	Mg	Na	K	CO ₃	HCO ₃	SO ₄	Cl	NO ₃	F	B	SiO ₂	Evap 180°C	CaCO ₃	
16S/21E-21F80 M 7-30-62 5050		69	8.2	228	22 1.10 48	0	26 1.13 49	3 0.08 3	0	102 1.67 70	8 0.17 7	12 0.34 14	12.0 0.19 8	0.1	0.00	33	166 160	55	
		70	7.9	293	27 1.35 51	1 0.08 3	27 1.17 44	2 0.05 2	0	94 1.54 76	8 0.17 8	2 0.06 3	16.0 0.26 13	0.1	0.16	22	151	72	
16S/21E-35P 1 M 8- 9-63 5000		69	7.9	482	51 2.54 52	10 0.82 17	34 1.48 30	3 0.08 2	0	190 3.11 64	19 0.40 8	36 1.02 21	22.0 0.35 7	0.2	0.00	37	306	168	
		68	8.1	609	--	--	59 2.57	--	0	293 4.80	--	23 0.65	--	--	0.07	--	--	187	
16S/23E- 8P 1 M 9-13-63 5000		67	7.8	327	30 1.50 48	8 0.66 21	21 0.91 29	3 0.08 3	0	127 2.08 67	21 0.44 14	10 0.28 9	19.0 0.31 10	--	0.00	--	174 223	108	
		76	8.0	1720	147 7.22 38	16 1.58 8	232 10.10 53	5 0.14 1	0	130 2.27 12	719 14.76 78	60 1.95 10	0.2 0.01	0.4	2.04	50	1300	433	
17S/17E- 2N 1 M 7-21-54 5050		--	7.6	1930	98 4.89 24	23 1.89 9	315 13.70 67	4 0.10	0	235 3.85 19	622 12.95 65	109 3.07 15	0.5 0.01	0.4	1.20	--	1289	339	
		76	6.8	1270	70 3.49	20 1.64	164 7.13	--	--	116 1.90	476 9.91	47 1.33	--	--	0.50	--	--	257	
17S/17E-23Q 1 M 8-15-51 5050		76	7.8	1280	66 3.29 25	23 1.89 14	183 7.96 60	3 0.08 1	0	115 1.88 14	487 10.14 76	44 1.24 9	0.2	0.2	0.50	35	898	259	
		75	7.7	1210	63 3.14 25	19 1.56 12	181 7.87 62	2 0.05	0	121 1.98 16	449 9.35 75	40 1.13 9	0.3	0.3	1.80	23	839	235	

MINERAL ANALYSES OF GROUND WATER

FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value					Mineral constituents in parts per million								
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180 °C	TOTAL hardness as CaCO ₃
17S/17E-23Q 1 M 7-27-55 5050		76	--	1190	--	--	180 7.83	--	--	--	--	40 1.13	--	--	0.71	--	--	232
-23Q 1 M 6-27-56 5050		76	--	1210	--	--	178 7.74	--	--	--	--	42 1.18	--	--	0.78	--	--	232
-23Q 1 M 7-31-57 5050		76	--	1210	--	--	167 7.26	--	--	--	--	41 1.16	--	--	0.72	--	--	254
-23Q 1 M 6-26-58 5050		76	8.0	1250	66 3.29 25	21 1.73 13	186 8.09 61	2 0.05	0	121 1.98 15	470 9.79 75	46 1.30 10	0.0	0.2	0.90	26	878	251
-23Q 1 M 7-15-59 5050		76	8.8	1260	66 3.29 26	22 1.81 14	178 7.74 60	2 0.05	11 0.37 3	116 1.90 15	450 9.37 72	47 1.33 10	0.2	0.2	0.81	26	860	255
-23Q 1 M 7-19-60 5050		--	8.1	1220	65 3.24 25	21 1.73 13	186 8.09 62	2 0.05	0	127 2.08 16	458 9.54 74	48 1.35 10	0.2	0.2	0.92	25	869	249
-23Q 1 M 10-17-61 5050		77	8.0	1270	70 3.49 27	20 1.64 13	177 7.70 60	4 0.10 1	0	130 2.13 17	443 9.22 72	52 1.47 11	0.1	0.3	0.70	27	858	257
-23Q 1 M 6-21-62 5050		76	--	1290	--	--	172 7.48	2 0.05	--	--	470 9.79	48 1.35	--	--	0.73	--	--	262
-23Q 1 M 8-22-63 5050		76	--	1340	--	--	176 7.65	--	--	--	--	50 1.41	--	--	0.80	--	--	265
17S/17E-25N 1 M 7-19-60 5050		--	8.1	1220	67 3.34 26	20 1.64 13	178 7.74 61	2 0.05	0	119 1.95 15	468 9.74 75	48 1.35 10	0.4 0.01	0.2	0.94	25	868	249

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million				
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180° C
17S/17E-27R 1 M 8-15-51 5050		77	6.8	1300	82 4.09	17 1.40	170 7.39	-	0	116 1.90	491 10.22	51 1.44	--	--	0.80	--	275
-27R 1 M 8-13-52 5050		76	7.7	1320	85 4.24 31	18 1.48 11	177 7.70 57	2 0.05	0	116 1.90 14	477 9.93 75	49 1.38 10	0.3	0.2	1.10	23	286
-27R 1 M 7- 9-53 5050		77	7.5	1300	82 4.09 30	21 1.73 13	177 7.70 57	2 0.05	0	112 1.84 13	505 10.51 77	49 1.38 10	0.1	0.3	0.61	24	291
-27R 1 M 7-21-54 5050		76	7.6	1130	82 4.09 30	22 1.81 13	178 7.74 57	1 0.03	0	110 1.80 13	488 10.16 76	49 1.38 10	0.3	0.3	0.75	24	295
-27R 1 M 7-27-55 5050		75	--	1310	--	--	176 7.65	--	--	--	--	58 1.64	--	--	0.80	--	--
-27R 1 M 6-27-56 5050		77	--	1330	--	--	174 7.57	--	--	--	--	53 1.49	--	--	0.75	--	301
-27R 1 M 7-31-57 5050		75	--	1280	--	--	167 7.26	--	--	--	--	49 1.38	--	--	0.68	--	208
-27R 1 M 6-26-58 5050		76	7.9	1350	86 4.29 30	25 2.06 15	177 7.70 55	2 0.05	0	105 1.72 12	518 10.78 77	51 1.44 10	0.0	0.2	0.80	24	318
-27R 1 M 7-15-59 5050		76	8.8	1410	88 4.39 30	32 2.63 18	175 7.61 52	2 0.05	10 0.33 2	100 1.64 11	541 11.26 76	54 1.52 10	0.8 0.01	0.2	0.85	26	351
-27R 1 M 7-19-60 5050		76	8.1	1290	81 4.04 30	22 1.81 13	178 7.74 57	2 0.05	0	109 1.79 13	509 10.60 77	50 1.41 10	0.4 0.01	0.2	0.86	24	293

MINERAL ANALYSES OF GROUND WATER

FRESNO - MADERA AREA

State Well Number			Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
						Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	IDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
17S/17E-27R 1 M 10-17-61 5050			76	7.9	1290	79 3.94 29	24 1.97 15	173 7.52 56	4 0.10 1	0	109 1.79 14	482 10.04 76	50 1.41 11	0.5 0.01	0.3	0.80	30	897	296
-27R 1 M 4-25-62 5050			76	--	1310	--	--	163 7.09	2 0.05	--	--	500 10.41	48 1.35	--	--	0.78	--	--	292
-27R 1 M 8-22-63 5050			75	--	1370	--	--	172 7.48	--	--	--	--	51 1.44	--	--	0.70	--	--	301
17S/18E-24J 1 M 8-28-63 5000			--	8.2	1170	7 0.35 3	0	246 10.70 97	1 0.03	0	307 5.03 46	50 1.04 9	174 4.91 45	0.7 0.01	1.3	0.98	19	651 665	18
17S/18E-35Q 1 M 10-27-49 5001			70	--	1000	--	--	190 8.26	--	--	--	--	94 2.65	--	--	--	--	--	142
-35Q 1 M 11- 2-51 5000			70	7.6	1440	37 1.85	12 0.99	265 11.52	--	0	262 4.29	328 6.83	123 3.47	--	--	1.20	--	--	170
-35Q 1 M 7-15-59 5050			74	8.9	1320	55 2.74 20	8 0.66 5	238 10.35 75	1 0.03	20 0.67 5	294 4.82 35	294 6.12 44	79 2.23 16	0.6 0.01	0.7	1.40	20	862	165
-35Q 1 M 7-19-60 5050			71	8.1	1270	53 2.64 19	8 0.66 5	235 10.22 75	1 0.03	0	303 4.97 36	307 6.39 47	80 2.26 17	0.4 0.01	0.8	0.64	20	855	165
-35Q 1 M 6-19-62 5050			71	8.4	1440	56 2.79 19	9 0.74 5	258 11.22 76	1 0.03	2 0.07	263 4.31 29	387 8.06 55	83 2.34 16	0.2	0.8	1.60	20	948	177
-35Q 1 M 8-26-63 5050			71	8.5	1090	35 1.75 14	11 0.90 7	225 9.78 78	1 0.03	13 0.43 4	304 4.98 41	235 4.89 40	68 1.92 16	0.0	0.6	1.40	17	756 744	133

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TABLE E-2
SEMI-CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					TOTAL hardness as CaCO ₃
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180°C	
17S/19E-1G 1 M 8-14-63 5000		71	7.5	303	22	1	36	1	0	84	17	33	1.9	0.2	0.05	41	194	59
					1.10 40	0.08 3	1.57 56	0.03 1		1.38 51	0.35 13	0.93 35	0.03 1				196	
17S/19E-16H 1 M 8-2-55 5050		68	8.6	520	6	2	101	1	11	199	8	36	0.2	1.6	1.30	26	292	23
					0.30 6	0.16 3	4.39 90	0.03 1	0.37 8	3.26 68	0.17 4	1.02 21						
17S/19E-21P80 M 8-3-55 5050		--	8.5	818	17	6	168	1	10	306	44	77	0.3	1.4	0.94	32	508	67
					0.85 10	0.49 6	7.30 84	0.03 1	0.33 4	5.02 59	0.92 11	2.17 26						
17S/19E-27A 1 M 8-19-63 5000		70	8.8	435	2	0	91	0	14	159	22	35	0.0	--	--	--	242	5
					0.10 2		3.96 98		0.47 10	2.61 58	0.46 10	0.99 22						
17S/20E-2M 1 M 8-28-63 5000		--	7.5	307	18	0	41	1	0	71	20	37	4.4	0.2	0.06	24	181	45
					0.90 33		1.78 66	0.03 1		1.16 43	0.42 16	1.04 39	0.07 3				186	
17S/20E-22P 1 M 8-27-63 5000		66	7.8	275	4	0	61	1	0	149	13	4	0.0	0.1	0.04	18	174	10
					0.20 7		2.65 92	0.03 1		2.44 87	0.27 10	0.11 4					179	
17S/21E-1J80 M 10-7-63 5050		69	7.9	394	42	11	20	2	0	142	21	33	7.4	--	0.00	--	205	149
					1.97 51	0.90 23	0.87 23	0.11 3		2.24 64	0.45 13	0.70 20	0.13 4				276	
17S/21E-17P 1 M 8-13-63 5000		--	7.7	209	32	2	8	0	0	79	34	1	1.9	0.2	0.00	26	144	88
					1.60 76	0.16 8	0.35 17			1.29 63	0.71 34	0.03 1	0.03 1					

MINERAL ANALYSES OF GROUND WATER
 CONFINED AQUIFER
 FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value						Mineral constituents in parts per million					TOTAL hardness as CaCO ₃		
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B		Silica SiO ₂	TDS Computed Evap 180°C
10S/14E-11J 1 M 10-22-64 5000		--	8.5	331	--	--	--	--	4 0.13	151 2.47	--	12 0.34	--	--	--	--	112	
10S/14E-19R 1 M 10-7-64 5000		--	8.5	399	--	--	--	--	4 0.13	121 1.98	--	46 1.30	--	--	--	--	95	
10S/14E-33J 2 M 10-18-64 5000		68	8.4	372	--	--	--	--	4 0.13	98 1.61	--	56 1.58	--	--	--	--	112	
11S/14E-30H 1 M 10-7-64 5000		67	7.9	316	21 1.05 35	5 0.41 14	33 1.43 48	4 0.10 3	0 2.18 74	133 2.18 74	4 0.08 3	21 0.59 20	6.1 0.10 3	0.00	--	159 248	73	
12S/11E-13D 2 M 8-13-51 5000		--	7.5	1590	--	--	286 12.44	--	0 3.15	192 3.15	450 9.37	100 2.82	--	2.40	--	--	196	
12S/11E-23R 2 M 7-58 5050		--	8.0	2520	118 5.89 23	62 5.10 19	348 15.13 58	2 0.05	0 2.52 10	154 2.52 10	512 10.66 41	459 12.94 49	2.1 0.03	0.3	3.70	30	1613	550
12S/11E-25Q 1 M 8-14-51 5000		--	7.3	2570	127 6.34	58 4.77	365 15.87	0	0 3.21	196 3.21	583 12.14	415 11.70	--	--	3.90	--	556	
12S/12E-18D 1 M 8-14-51 5000		82	7.8	2010	--	--	385 16.74	--	0 2.59	158 2.59	550 11.45	196 5.53	--	--	2.40	--	172	
12S/12E-19N 1 M 4-10-56 5050		83	7.9	2134	45 2.25 11	18 1.48 7	397 17.26 82	3 0.08	0 2.70 13	165 2.70 13	581 12.10 58	213 6.01 29	0.1	0.4	1.90	32	1373	187
12S/12E-19N 1 M 8-13-51 5000		81	7.8	1390	--	--	242 10.52	--	0 3.57	218 3.57	400 8.33	84 2.37	--	--	3.40	--	180	

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TABLE E-2
 CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
 FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million					
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180° C
12S/12E-21E 1 M 2- 5-48 5702		--	7.8	--	38 1.90	19 1.56	434 18.87	--	0	172 2.82	693 14.43	181 5.10	--	1.25	32	1513	173
-21E 1 M 8-14-51 5000		83	7.6	2130	--	--	440 19.13	--	0	176 2.88	600 12.49	180 5.08	--	2.90	--	--	180
12S/12E-25J 2 M 7-22-60 5050		70	8.4	1280	26 1.30 10	5 0.41 3	266 11.57 87	2 0.05	4 0.13 1	319 5.23 39	293 6.10 46	63 1.78 13	1.9 0.03	0.43	51	869	86
-25J 2 M 8-25-61 5050		77	8.2	1290	25 1.25 9	6 0.49 4	266 11.57 87	1 0.03	0	329 5.39 41	282 5.87 45	63 1.78 14	1.8 0.03	0.40	51	858	87
12S/12E-31M 1 M 8-14-51 5000		79	7.3	2470	102 5.09	51 4.19	385 16.74	0	0	213 3.49	713 14.84	280 7.90	--	2.90	--	--	464
-31M 1 M 4-10-56 5050		80	7.9	2500	94 4.69 18	57 4.69 18	385 16.74 64	4 0.10	0	217 3.56 13	730 15.20 58	272 7.67 29	0.2	3.60	36	1689	469
12S/17E- 5R 1 M 7-25-57 5050		70	7.6	191	13 0.65 35	5 0.41 22	16 0.70 38	3 0.08 4	0	76 1.25 69	3 0.06 3	17 0.48 27	1.5 0.02 1	0.00	65	161	53
- 5R 1 M 8- 6-58 5128		72	7.8	194	14 0.70 39	4 0.33 18	16 0.70 39	3 0.08 4	0	78 1.28 71	0 0.10 5	18 0.51 28	0.6 0.01 1	0.00	70	164	52
- 5R 1 M 7-23-59 5128		71	7.8	194	15 0.75 39	4 0.33 17	17 0.74 39	4 0.10 5	0	79 1.29 66	5 0.10 5	18 0.51 26	2.6 0.04 2	0.00	69	174	54
- 5R 1 M 8-23-60 5128		72	7.8	209	17 0.85 45	3 0.25 13	16 0.70 37	3 0.08 4	0	78 1.28 67	5 0.10 5	18 0.51 27	2.0 0.03 2	0.13	48	150	55

TABLE 2-2
 CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
 FRESNO - MADERA AREA

State Well Number			Temp. when Sampled ° F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million					TOTAL hardness as CaCO 3
Date Sampled, Time	Agy. Coll.	Calcium Ca				Magne-sium Mg	Sodium Na	Potas-sium K	Carbon-ate CO 3	Bicar-bonate HCO 3	Sulfate SO 4	Chlo-ride Cl	Ni-trate NO 3	Fluo-ride F	Boron B	Sili-co SIO 2	TDS Computed Evap 180° C	
12S/17E- 5R 1 M 7-25-61 5128		16 0.80 43	3 0.25 14	16 0.70 38	4 0.10 5	0	78 1.28 68	4 0.08 4	17 0.48 26	2.3 0.04 2	0.2	0.05	83	184	53			
8-13-62 5128		--	--	17 0.74	3 0.08	--	--	--	17 0.48	--	--	0.06	--	--	56			
13S/12E- 4N 1 M 8-14-51 5000		29 1.45	11 0.90	215 9.35	--	0	220 3.61	359 7.47	52 1.47	--	--	1.60	--	--	118			
13S/12E- 5N 1 7 8-14-51 5000		98 4.89	62 5.10	415 18.04	--	0	218 3.57	742 15.45	342 9.64	--	--	4.20	--	--	500			
13S/12E- 9R 1 M 8-14-51 5000		60 2.99	29 2.38	205 8.91	--	0	170 2.79	484 10.08	90 2.54	--	--	3.10	--	--	269			
13S/12E-10N 1 M 8-14-51 5000		34 1.70	15 1.23	295 12.83	--	0	220 3.61	458 9.54	112 3.16	--	--	3.10	--	--	147			
13S/12E-22Q 1 M 8-14-51 5000		37 1.85	18 1.48	295 12.83	--	0	206 3.38	477 9.93	127 3.58	--	--	0.60	--	--	167			
13S/12E-24N 1 M 8-14-51 5000		26 1.30	10 0.82	310 13.48	--	0	204 3.34	519 10.81	80 2.26	--	--	2.80	--	--	106			
13S/12E-26Q 3 M 8-15-51 5000		38 1.90	22 1.81	320 13.91	--	0	212 3.47	542 11.28	99 2.79	--	--	2.70	--	--	186			
3- 5-58 5050	--26Q 3 M	31 1.55 10	16 1.32 8	294 12.78 81	3 0.08 1	9 0.30 2	187 3.06 20	480 9.99 64	80 2.26 14	4.0 0.06	0.5	2.20	38	1050	144			

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TABLE E-2
 CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
 FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million					
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boron B	Sili- ca SiO ₂	IDS Computed Evap 180° C
13S/12E-35N 1 M 8-15-51 5000		84	7.1	1930	42 2.10	23 1.89	355 15.44	--	0	211 3.46	584 12.16	140 3.95	--	--	2.60	--	200
13S/12E-36D 2 M 8-15-51 5000		78	7.5	2160	44 2.20	31 2.55	390 16.96	--	0	233 3.82	713 14.84	130 3.67	--	--	3.80	--	238
13S/12E-36M 1 M 8-15-51 5000		88	7.5	2040	36 1.80	21 1.73	395 17.17	--	0	214 3.51	984 20.49	131 3.69	--	--	3.02	--	177
13S/13E-9E 3 M 8-14-51 5000		86	7.4	4290	123 6.14	31 2.55	770 33.48	--	0	162 2.66	504 10.49	1020 28.76	--	--	1.10	--	435
13S/13E-9Q 1 M 8-23-51 5000		88	8.3	5140	94 4.69	29 2.38	975 42.39	5 0.13	0	145 2.38	520 10.83	1330 37.51	0.0	0.0	2.54	37	354
13S/13E-14N 1 M 8-14-51 5000		88	7.5	5130	110 5.49	24 1.97	970 42.18	--	0	136 2.23	502 10.45	1300 36.66	--	--	1.80	--	373
14N 1 M 8-11-52 5050		88	7.8	5330	111 5.54	26 2.14	1000 43.48	7 0.18	0	138 2.26	523 10.89	1390 39.20	1.2 0.02	--	1.30	44	384
14N 1 M 7-7-53 5050		86	7.5	5360	119 5.94	32 2.63	1060 46.09	4 0.10	0	136 2.23	509 10.60	1440 40.61	1.8 0.03	0.3	1.50	38	429
14N 1 M 7-20-54 5050		86	8.2	5390	129 6.44	16 1.32	1010 43.91	6 0.15	0	139 2.28	477 9.93	1380 38.92	2.6 0.04	0.1	1.60	47	388
14N 1 M 7-28-55 5050		88	--	5590	--	--	1140 49.57	--	--	--	--	742 20.92	--	--	1.90	--	415

CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (microhmhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactivity value							Mineral constituents in parts per million						
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	IDS Computed Evap 180°C	TOTAL hardness as CaCO ₃
13S/13E-14N 1 M 10-11-55 5050		87	--	5660	--	--	1070 46.52	--	--	--	--	718 20.25	--	--	--	--	--	412
13S/13E-16N 1 M 8-14-51 5000		87	7.5	4380	96 4.79	21 1.73	840 36.52	--	0	148 2.43	505 10.51	1040 29.33	--	--	1.50	--	--	326
13S/13E-16R 1 M 8-14-51 5000		85	7.5	4540	117 5.84	22 1.81	810 35.22	--	0	164 2.69	395 8.22	1160 32.71	--	--	0.70	--	--	383
13S/13E-25N 1 M 8-15-51 5000		82	7.3	3110	82 4.09	16 1.32	590 25.65	--	0	212 3.47	370 7.70	682 19.23	--	--	0.80	--	--	271
13S/13E-27P 1 M 8-15-51 5000		87	7.4	4540	105 5.24	20 1.64	870 37.83	--	0	168 2.75	507 10.56	1100 31.02	--	--	1.70	--	--	344
13S/13E-30R 1 M 8-15-51 5000		87	7.6	2140	33 1.65	17 1.40	425 18.48	--	0	218 3.57	669 13.93	139 3.92	--	--	3.20	--	--	153
13S/13E-32N 2 M 8-15-51 5000		87	7.6	1870	43 2.15	32 2.63	305 13.26	--	0	221 3.62	630 13.12	99 2.79	--	--	1.90	--	--	239
13S/13E-33N 2 M 8-15-51 5000		89	7.8	2160	34 1.70	9 0.74	435 18.91	--	0	261 4.28	626 13.03	191 5.39	--	--	1.90	--	--	122
13S/14E-7N 1 M 8-15-51 5000		--	7.4	1620	33 1.65	5 0.41	315 13.70	--	0	231 3.79	436 9.08	107 3.02	--	--	0.70	--	--	103
13S/14E-10D 1 M 8-23-51 5000		--	8.1	2300	56 2.79 12	16 1.32 6	450 19.57 82	6 0.15 1	0	228 3.74 17	478 9.95 45	291 8.21 37	1.6 0.03	0.3	1.42	75	1487	206

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TABLE E-2
 CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
 FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value						Mineral constituents in parts per million						
					Calcium Ca	Magne-sium Mg	Sodium Na	Potas-sium K	Carbon-ate CO ₃	Bicar-bonate HCO ₃	Sulfate SO ₄	Chlo-ride Cl	Ni-trate NO ₃	Fluo-ride F	Boron B	Sili-ca SiO ₂	TDS Computed Evap 180° C
14S/12E- 2N 1 M 8-15-51 5000		85	8.0	3280	61 3.04	36 2.96	600 26.09	--	0	250 4.10	499 10.39	640 18.05	--	--	5.70	--	300
14S/12E- 3Q 1 M 8-15-51 5000		84	7.1	4410	141 7.04	93 7.65	700 30.44	--	0	205 3.36	780 16.24	925 26.09	--	--	5.20	--	735
14S/12E-11F 1 M 8-15-51 5000		85	7.2	2550	59 2.94	45 3.70	445 19.35	--	0	211 3.46	741 15.43	272 7.67	--	--	4.40	--	332
14S/12E-12N 1 M 8-15-51 5000		84	7.5	2310	52 2.59	23 1.89	425 18.48	--	0	220 3.61	648 13.49	232 6.54	--	--	4.10	--	224
14S/12E-13N 1 M 1-25-52 5001		85	--	2400	48 2.40 10	30 2.47 10	430 18.70 79	4 0.10	0	220 3.61 15	640 13.32 56	240 6.77 29	1.4 0.02	--	4.10	--	244
14S/12E-13N 1 M 8-16-51 5000		85	7.5	2100	64 3.19	42 3.45	389 16.91	--	0	220 3.61	742 15.45	190 5.36	--	--	4.10	--	332
14S/12E-13N 1 M 10-16-51 5001		84	--	2300	68 3.39 14	43 3.54 14	400 17.39 71	5 0.13 1	0	220 3.61 15	730 15.20 63	190 5.36 22	1.6 0.03	--	--	--	347
14S/12E-14D 1 M 8-23-51 5000		83	7.9	4200	186 9.28 21	8 0.66 1	800 34.78 77	9 0.23 1	0	290 4.75 11	925 19.26 45	598 16.86 40	98.0 1.58 4	--	8.91	43	497
14S/12E-80Z80 M 9-20-58 5050		74	7.4	16900	568 28.34 15	294 24.18 13	3070 133.48 72	19 0.49	0	110 1.80 1	2 0.04	6650 187.53 99	8.5 0.14	0.0	21.00	24	2628
14S/13E- 7N 1 M 8-15-51 5000		86	7.5	1900	58 2.89	32 2.63	320 13.91	--	0	203 3.33	687 14.30	98 2.76	--	--	2.70	--	276

TABLE C-2
 CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
 FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	H P	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million					
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180° C
14S/13E-8N 1 M 8-15-51 5000		89	7.4	1880	35 1.75	19 1.56	365 15.87	--	0	219 3.59	607 12.64	99 2.79	--	3.10	--	--	166
14S/13E-12N 1 M 8-15-51 5050		84	7.4	1110	19 0.95	6 0.49	210 9.13	--	--	268 4.39	268 5.58	43 1.21	--	0.80	--	678	72
-12N 1 M 8-11-52 5050		84	8.4	1300	21 1.05	7 0.58	260 11.30	4 0.10	0	253 4.15	302 6.29	78 2.20	1.5 0.02	1.90	63	863	82
-12N 1 M 7-7-53 5050		84	7.7	1320	22 1.10	8 0.66	263 11.44	4 0.10	0	257 4.21	309 6.43	86 2.43	0.4 0.01	2.50	47	869 870	88
-12N 1 M 7-20-54 5050		82	8.6	1180	18 0.90	7 0.58	244 10.61	3 0.08	14 0.47	271 4.44	274 5.70	55 1.55	1.9 0.03	0.90	61	813 797	74
-12N 1 M 7-28-55 5050		84	--	1330	--	--	259 11.26	--	--	--	--	88 2.48	--	1.20	--	--	--
-12N 1 M 6-26-56 5050		82	--	1190	--	--	228 9.91	--	--	--	--	61 1.72	--	0.90	--	--	78
-12N 1 M 8-1-57 5050		83	--	1280	--	--	259 11.26	--	--	--	--	88 2.48	--	1.20	--	--	78
-12N 1 M 6-24-58 5050		83	7.7	1150	19 0.95	4 0.33	237 10.30	4 0.10	0	262 4.29	261 5.43	70 1.97	0.4 0.01	1.10	64	790 790	64
-12N 1 M 7-14-59 5050		76	8.1	1290	20 1.00	4 0.33	262 11.39	4 0.10	0	261 4.28	293 6.10	90 2.54	1.7 0.03	1.40	49	854 854	67

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TABLE E-2
 MINERAL ANALYSES OF GROUND WATER
 CONFINED AQUIFER
 FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	IDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
14S/13E-12N 1 M 7-19-60 5050		80	7.8	1250	21 1.05 8	4 0.33 3	262 11.39 89	3 0.08 1	0	254 4.16 33	287 5.98 47	90 2.54 20	1.7 0.03	0.6	1.12	63	858 858	69
-12N 1 M 4-26-62 5050		81	8.3	1240	20 1.00 8	5 0.41 3	267 11.61 88	5 0.13 1	0	265 4.34 34	292 6.08 48	82 2.31 18	1.0 0.02	0.4	0.93	50	854 900	71
-12N 1 M 8-13-63 5050		87	--	2930	--	--	556 24.17	--	--	--	--	586 16.53	--	--	1.30	--	--	165
14S/13E-21N 1 M 8-15-51 5050		88	7.8	2170	72 3.59	57 4.69	355 15.44	--	--	225 3.69	797 16.59	117 3.30	--	--	3.20	--	--	414
-21N 1 M 10-14-52 5050		89	7.9	2110	62 3.09 14	54 4.44 19	350 15.22 67	4 0.10	--	216 3.54 16	769 16.01 70	114 3.21 14	1.8 0.03	0.5	3.60	44	1509	377
-21N 1 M 7-7-53 5050		86	7.6	2690	115 5.74 19	120 9.87 32	348 15.13 49	7 0.18 1	0	220 3.61 11	1150 23.94 76	146 4.12 13	0.8 0.01	0.4	2.20	44	2042	781
-21N 1 M 7-28-55 5050		--	--	2100	--	--	340 14.78	--	--	--	--	110 3.10	--	--	2.60	--	--	--
-21N 1 M 10-11-55 5050		88	--	2090	--	--	336 14.61	--	--	--	--	110 3.10	--	--	--	--	--	401
-21N 1 M 6-26-56 5050		88	--	2110	--	--	342 14.87	--	--	--	--	121 3.41	--	--	3.20	--	--	390
-21N 1 M 7-31-57 5050		88	--	2150	--	--	330 14.35	--	--	--	--	120 3.38	--	--	3.30	--	--	424

TABLE-AQUIFER
MINERAL ANALYSES OF GROUND WATER
 FRESNO - MADERA AREA

State Well Number		Temp when Sampled °F	H _p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carban- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Flua- ride F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180°C CaCO ₃	TOTAL hardness as CaCO ₃
14S/13E-21N 1 M 6-25-58 5050		88	7.6	2300	78 3.89 16	84 6.91 28	322 14.00 56	6 0.15 1	0	210 3.44 13	874 18.20 71	140 3.95 15	1.7 0.03	0.6	3.50	46	1659	540
-21N 1 M 7-14-59 5050		88	8.2	2210	71 3.54 14	73 6.00 24	342 14.87 61	4 0.10	0	246 4.03 16	818 17.03 69	123 3.47 14	0.2	0.4	3.00	43	1599	477
-21N 1 M 7-19-60. 5050		85	8.0	2540	132 6.59 22	140 11.51 38	274 11.91 40	5 0.13	0	222 3.64 12	1120 23.32 76	132 3.72 12	4.6 0.07	0.2	3.10	51	1971	906
-21N 1 M 10-19-61 5050		90	8.4	1760	38 1.90 11	23 1.89 11	320 13.91 78	3 0.08	6 0.20 1	165 2.70 16	584 12.16 71	74 2.09 12	2.2 0.04	0.5	1.90	44	1178	190
-21N 1 M 6-19-62 5050		91	--	1760	--	--	298 12.96	3 0.08	--	--	612 12.74	76 2.14	--	--	1.80	--	--	208
14S/13E-25N 1 M 8-15-51 5050		89	7.3	1990	34 1.70	13 1.07	375 16.31	--	--	172 2.82	637 13.26	141 3.98	--	--	1.60	--	--	139
-25N 1 M 8-11-52 5050		90	8.5	1970	34 1.70 8	17 1.40 7	390 16.96 84	3 0.08	6 0.20 1	160 2.62 13	622 12.95 65	141 3.98 20	1.6 0.03	0.6	2.70	40	1337	155
-25N 1 M 7-7-53 5050		90	7.6	1900	32 1.60 8	17 1.40 7	366 15.91 84	4 0.10 1	0	178 2.92 15	591 12.30 64	139 3.92 20	1.1 0.02	0.6	1.10	47	1266	150
-25N 1 M 7-20-54 5050		89	8.1	1930	35 1.75 9	15 1.23 6	365 15.87 84	3 0.08	0	175 2.87 15	592 12.33 64	139 3.92 20	1.7 0.03	0.5	1.50	46	1285	149
-25N 1 M 7-28-55 5050		90	--	1940	--	--	387 16.83	--	--	--	--	139 3.92	--	--	1.90	--	--	--

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TABLE E-2
 MINERAL ANALYSES OF GROUND WATER
 CONFINED AQUIFER
 FRESNO - MADERA AREA

State Well Number	Temp. when Sampled °F	H P	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million								
				Calcium Magnesium Sodium Potassium Carbonate Bicarbonate Sulfate Chloride Nitrate Fluoride Boron Silica							TDS Computed Evap 180° C	TOTAL hardness as CaCO 3							
				Ca	Mg	Na	K	CO 3	HCO 3	SO 4			Cl	NO 3	F	B	SiO 2		
14S/13E-25N 1 M 10-11-55 5050	89	--	1860	--	--	365 15.87	--	--	--	--	--	--	--	--	--	130 3.67	--	--	149
-25N 1 M 6-29-56 5050	88	--	2010	--	--	377 16.39	--	--	--	--	--	--	--	1.43	--	156 4.40	--	--	192
-25N 1 M 7-31-57 5050	89	--	1960	--	--	366 15.91	--	--	--	--	--	--	--	1.90	--	45 1.27	--	--	198
-25N 1 M 6-25-58 5050	88	7.8	2120	53 2.64 12	34 2.80 13	362 15.74 74	4 0.10	0	198 3.25 15	614 12.78 61	175 4.94 23	4.3 0.07	0.6	2.10	46	1392			272
-25N 1 M 7-14-59 5050	89	8.2	2150	58 2.89 13	37 3.04 13	383 16.65 73	3 0.08	0	187 3.06 14	657 13.68 61	197 5.56 25	7.0 0.11	0.6	2.50	47	1484			297
-25N 1 M 7-19-60 5050	--	8.2	2200	54 2.69 12	36 2.96 13	377 16.39 74	3 0.08	0	180 2.95 13	691 14.39 64	178 5.02 22	6.2 0.10	0.7	2.70	46	1483			283
-25N 1 M 8-25-61 5050	88	8.4	2410	68 3.39 13	54 4.44 17	408 17.74 69	3 0.08	8 0.27 1	151 2.47 10	741 15.43 63	222 6.26 25	7.8 0.13 1	0.4	1.90	48	1636			392
-25N 1 M 4-26-62 5050	87	--	2610	--	--	384 16.70	4 0.10	--	--	882 18.36	232 6.54	--	--	2.40	--	232 6.15	--	--	517
-25N 1 M 8-13-63 5050	86	--	2600	--	--	390 16.96	--	--	--	--	218 6.15	--	--	2.20	--	218 6.15	--	--	533
14S/13E-26M 1 M 8-15-51 5000	92	7.4	2170	34 1.70	17 1.40	425 18.48	--	0	156 2.56	749 15.59	132 3.72	--	--	2.50	--	132 3.72	--	--	155

MINERAL ANALYSES OF GROUND WATER

FRESNO - MADERA AREA

State Well Number			Temp. when Sampled °F	H p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million				
Date Sampled Time	Agy. Coll.	Calcium Ca				Magne-sium Mg	Sodium Na	Potas-sium K	Carbon-ate CO ₃	Bicar-bonate HCO ₃	Sulfate SO ₄	Chlo-ride Cl	Ni-trate NO ₃	Fluo-ride F	Baron B	Sili-ca SiO ₂	TDS Computed Evap 180° C
14S/13E-29Q 1 M 8-16-51 5000		19 0.95	5 0.41	460 20.00	--	0	254 4.16	667 13.89	132 3.72	--	--	--	3.60	--		68	
14S/13E-30N 1 M 8-16-51 5000		42 2.10	24 1.97	342 14.87	--	0	204 3.34	658 13.70	95 2.68	--	--	--	2.60	--		204	
14S/13E-30Q 1 M 8-16-51 5000		57 2.84	44 3.62	285 12.39	--	0	198 3.25	652 13.57	80 2.26	--	--	--	2.30	--		323	
14S/13E-35E 1 M 8-15-51 5000		36 1.80	18 1.48	392 17.04	--	0	160 2.62	746 15.53	130 3.67	--	--	--	1.80	--		164	
14S/14E- 7M 1 M 8-13-51 5000		--	--	445 19.35	--	0	210 3.44	470 9.79	330 9.31	--	--	--	1.50	--		146	
14S/14E- 9E 1 M 7-14-59 5050		80 3.99 12	22 1.81 5	642 27.91 83	4 0.10	0	180 2.95 9	487 10.14 30	752 21.21 62	1.7 0.03	0.4	1.50	45		2124	290	
-- 9E 1 M 7-19-60 5050		280 13.97 32	146 12.01 27	414 18.00 41	12 0.31 1	0	220 3.61 8	1150 23.94 54	601 16.95 38	1.1 0.02	1.0	1.40	73		2788	1300	
-- 9E 1 M 8-25-61 5125		302 15.07 33	138 11.35 25	432 18.78 41	12 0.31 1	0	191 3.13 7	1180 24.57 56	570 16.07 37	3.5 0.06	0.2	1.70	68		2801	1322	
-- 9E 1 M 4-26-62 5050		275 13.72 35	134 11.02 28	317 13.78 35	16 0.41 1	0	218 3.57 9	861 17.93 47	584 16.47 43	4.0 0.06	0.2	1.79	56		2356 2590	1238	
-- 9E 1 M 8-13-63 5050		--	--	439 19.09	--	--	--	--	631 17.79	--	--	1.80	--			1390	

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TABLE E-2
 CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
 FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million				
Date Sampled Time	Agy. Coll.				Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boron B	Sili- co SiO ₂	TDS Computed Evap 180° C as CaCO ₃
14S/14E- 9E 1 M 7-28-64 5050		--	7.1	4800	--	--	496 21.57	--	--	--	--	844 23.80	--	--	1.90	--	1630
14S/14E- 9M 1 M 8-23-51 5000		85	8.0	7540	303 15.12 21	39 3.21 4	1260 54.78 75	13 0.33	0	126 2.07 3	398 8.29 11	2310 65.14 86	5.4 0.09	0.2	1.40	54	917
10-14-52 5050	-- 9M 1 M	82	8.3	2200	54 2.69 11	13 1.07 4	492 21.39 85	3 0.08	0	184 3.02 12	551 11.47 45	388 10.94 43	0.6 0.01	0.6	1.30	41	188
7- 7-53 5050	-- 9M 1 M	82	7.6	1970	47 2.35 12	13 1.07 6	361 15.70 82	3 0.08	0	198 3.25 16	535 11.14 56	192 5.41 27	2.3 0.04	0.5	2.50	33	171
7-28-55 5050	-- 9M 1 M	82	--	1860	--	--	361 15.70	--	--	--	--	159 4.48	--	--	1.50	--	175
10-11-55 5050	-- 9M 1 M	82	--	1840	--	--	346 15.04	--	--	--	--	152 4.29	--	--	--	--	181
8-23-56 5050	-- 9M 1 M	80	--	1760	--	--	321 13.96	--	--	--	--	120 3.38	--	--	1.23	--	236
8- 1-57 5050	-- 9M 1 M	82	--	1850	--	--	342 14.87	--	--	--	--	152 4.29	--	--	1.50	--	219
6-24-58 5050	-- 9M 1 M	82	7.7	1860	58 2.89 15	18 1.48 8	337 14.65 77	4 0.10 1	0	204 3.34 17	561 11.68 60	155 4.37 22	3.5 0.06	0.6	1.50	41	219
14S/14E-10N 1 M 8-13-51 5000		83	7.7	2490	--	--	490 21.31	--	0	186 3.05	580 12.08	470 13.25	--	--	2.50	--	188

CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number			Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million					TOTAL hardness as CaCO ₃	
						Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂		TDS Computed Evap 180° C
14S/14E-12N 1 M 5-18-51 5050			80	7.7	2520	31 1.55 6	6 0.49 2	506 22.00 91	3 0.08	0	173 2.84 11	544 11.33 46	375 10.58 43	1.0 0.02	--	1.61	--	1553	102
-12N 1 M 5-19-51 5050			75	8.9	2560	20 1.00 4	7 0.58 2	558 24.26 94	3 0.08	18 0.60 2	155 2.54 10	540 11.24 45	382 10.77 43	0.3	--	1.82	45	1651	79
-12N 1 M 8-13-51 5000			78	7.5	1790	--	--	385 16.74	--	0	174 2.85	590 12.28	178 5.02	--	--	1.90	--		78
-12N 1 M 11-13-51 5050			79	8.0	1860	26 1.30 7	4 0.33 2	385 16.74 90	5 0.13 1	0	174 2.85 16	514 10.70 59	165 4.65 25	3.0 0.05	0.3	0.53	69	1257	82
-12N 1 M 8-12-52 5050			79	8.3	1960	25 1.25 7	4 0.33 2	377 16.39 91	4 0.10 1	0	176 2.88 16	525 10.93 60	156 4.40 24	0.0	0.5	1.40	68	1247	79
-12N 1 M 7- 7-53 5050			--	7.8	1850	26 1.30 7	4 0.33 2	385 16.74 91	4 0.10 1	0	176 2.88 16	507 10.56 59	157 4.43 25	0.0	0.7	0.66	68	1239	82
-12N 1 M 7-20-54 5050			--	8.4	1980	29 1.45 7	4 0.33 2	409 17.78 90	4 0.10 1	8 0.27 1	167 2.74 14	526 10.95 57	181 5.10 27	1.5 0.02	0.4	1.20	67	1313	89
-12N 1 M 7-28-55 5050			--	--	2050	--	--	420 18.26	--	--	--	--	200 5.64	--	--	1.60	--		91
-12N 1 M 10-11-55 5050			--	--	2040	--	--	414 18.00	--	--	--	--	211 5.95	--	--	--	--		92
-12N 1 M 7-31-57 5050			--	--	2110	--	--	413 17.96	--	--	--	--	228 6.43	--	--	1.50	--		146

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TABLE E-2
 MINERAL ANALYSES OF GROUND WATER
 CONFINED AQUIFER
 FRESNO - MADERA AREA

State Well Number		Temp when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
14S/14E-12N 1 M 6-24-58 5050		80	7.6	2320	52 2.59 11	7 0.58 3	445 19.35 85	0.20 0.85 1	0	178 2.92 13	576 11.99 52	200 7.50 55	4.5 0.07	0.5	1.50	68	1550	159
14S/14E-12N 2 M 5-18-51 5000		74	7.3	4810	185 9.23 18	117 9.62 19	737 32.04 63	12 0.31 1	0	221 3.62 7	742 15.45 31	1000 30.40 61	11.0 0.18	--	1.53	72	5066	945
-12N 2 M 5-18-51 5000		74	7.3	4620	189 9.43 20	96 7.90 17	671 29.18 62	12 0.31 1	0	221 3.62 8	673 14.01 29	1060 29.89 63	10.0 0.16	--	1.64	70	2891	881
-12N 2 M 5-18-51 5000		74	7.4	4800	174 8.68 17	126 10.36 20	748 32.52 63	14 0.36 1	0	222 3.64 7	750 15.62 31	1100 31.02 61	11.0 0.18	--	1.46	75	3107	955
-12N 2 M 5-19-51 5000		68	7.2	4480	152 7.58 16	108 8.88 19	573 29.26 64	11 0.28 1	0	212 3.47 8	614 12.78 28	1040 29.53 64	4.8 0.08	--	1.64	49	2750	824
-12N 2 M 5-20-51 5000		74	7.8	4550	165 8.23 18	104 9.55 19	540 27.83 62	14 0.36 1	0	221 3.62 8	571 11.89 26	1070 30.17 66	9.0 0.15	--	1.65	75	2759	840
-12N 2 M 8-13-51 5000		79	7.3	4150	--	--	700 30.44	--	0	214 3.51	720 14.99	1040 29.50	--	--	1.60	--	--	--
14S/15E-13E 1 M 8-23-51 5000		78	8.5	1700	29 1.45 8	4 0.33 2	355 15.44 89	3 0.08	0	180 2.95 14	118 2.46 12	532 15.00 73	0.1	0.4	1.30	75	1206	89
14S/15E-18E 2 M 8-13-51 5000		79	7.6	1808	--	--	405 17.61	--	0	176 2.88	570 11.87	236 6.66	--	--	3.50	--	--	92
-18E 2 M 8-12-52 5050		78	7.9	2090	26 1.30 6	4 0.33 2	430 19.70 92	4 0.10	0	172 2.82 14	505 10.51 52	239 6.74 34	0.0	0.7	1.20	65	1557	82

CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value						Mineral constituents in parts per million							
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180°C	TOTAL hardness as CaCO ₃
14S/15E-28L 5 M 8-15-51 5050		--	7.2	1380	--	--	275 11.96	--	--	186 3.05	400 8.33	60 1.69	--	--	1.90	--	1085	190
-28L 5 M 8-31-54 5050		75	7.8	1940	--	--	--	--	0	176 2.88	650 13.53	152 3.72	--	--	1.60	--	--	162
-28L 5 M 8- -57 5050		--	7.5	1530	30 1.50	5 0.41	310 13.48	--	0	145 2.38	530 11.03	70 1.97	--	--	0.80	--	1085	96
-28L 5 M 7-29-58 5050		--	7.9	1460	32 1.60 11	5 0.41 3	281 12.22 85	7 0.18 1	0	184 3.02 21	432 8.99 62	86 2.43 17	2.1 0.03	0.3	1.50	74	1011	101
-28L 5 M 9-14-59 5050		--	7.9	1460	31 1.55 11	6 0.49 3	278 12.09 85	4 0.10 1	0	189 3.10 21	434 9.04 62	85 2.40 16	1.2 0.02	0.4	1.70	72	1006	102
-28L 5 M 7-21-60 5050		--	8.0	1400	33 1.65 11	5 0.41 3	282 12.26 85	4 0.10 1	0	182 2.98 21	443 9.22 64	78 2.20 15	1.4 0.02	0.3	1.40	73	1011	103
-28L 5 M 9-27-61 5125		80	8.3	1470	32 1.60 11	7 0.58 4	272 11.83 84	4 0.10 1	4 0.13 1	179 2.93 21	404 8.41 60	81 2.28 16	10.0 0.16 1	0.3	1.50	72	976	109
-28L 5 M 6-20-62 5050		80	8.1	1460	32 1.60 12	6 0.49 4	266 11.57 84	4 0.10 1	0	181 2.97 21	442 9.20 64	74 2.09 15	1.1 0.02	0.3	1.40	71	967	103
-28L 5 M 8- 1-63 5050		80	--	1500	--	--	273 11.87	--	--	--	--	77 2.17	--	--	1.40	--	--	103
14S/15E-30M 1 M 8-14-51 5000		81	7.7	1790	--	--	375 16.31	--	0	178 2.92	640 13.32	160 4.51	--	--	2.20	--	--	76

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TABLE E-2
 MINERAL ANALYSES OF GROUND WATER
 CONFINED AQUIFER
 FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	H _p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million				
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180°C
15S/12E-1F 1 M 8-15-51 5000		83	7.4	2926	--	--	594 25.83	--	0	218 3.57	1210 25.19	205 5.78	--	3.40	--	--	345
15S/12E-1N 1 M 8-15-51 5000		83	7.2	3785	--	--	737 32.04	--	0	226 3.70	1760 36.64	305 8.60	--	5.10	--	--	545
8-12-52 5050		80	7.5	2890	73 3.64 12	52 4.28 14	539 23.44 74	8 0.20 1	0	196 3.21 10	1090 22.69 73	178 5.02 16	9.8 0.16 1	2.40	46	2095	396
7-7-53 5050		81	7.3	2830	79 3.94 12	49 4.03 13	540 23.48 74	7 0.18 1	0	194 3.18 10	1080 22.49 73	175 4.94 16	9.8 0.16 1	2.60	48	2086	399
7-28-55 5050		82	--	3080	--	--	584 25.39	--	--	--	--	185 5.22	--	3.50	--	--	413
10-12-55 5050		82	--	3080	--	--	578 25.13	--	--	--	--	187 5.27	--	--	--	--	411
6-29-56 5050		81	--	3540	--	--	614 26.70	--	--	--	--	236 6.66	--	3.50	--	--	505
7-31-57 5050		81	--	3300	--	--	610 26.52	--	--	--	--	200 5.64	--	3.40	--	--	464
6-25-58 5050		82	7.2	3560	101 5.04 13	58 4.77 12	648 28.18 74	10 0.26 1	0	202 3.31 9	1310 27.27 73	242 6.82 18	8.4 0.14 1	3.60	44	2525	491
7-14-59 5050		82	8.2	4080	118 5.89 13	74 6.09 14	755 32.83 73	9 0.23 1	0	217 3.56 8	1625 33.63 75	271 7.64 17	16.0 0.26 1	4.40	44	3024	599

MINERAL ANALYSES OF GROUND WATER

FRESNO - MADERA AREA

State Well Number		Temp when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
					Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180°C	TOTAL hardness as CaCO ₃
15S/12E-1N 1 M 7-19-60 5050		--	8.3	4560	112 5.59 11	78 6.41 13	897 39.00 76	9 0.23	6 0.20	200 3.28 6	1810 37.68 74	326 9.19 18	23.0 0.37 1	0.8	5.30	42	3407	600
15S/12E-12Q 1 M 8-15-51 5000		90	7.2	2950	--	--	627 27.26	--	0	196 3.21	1300 27.07	205 5.78	--	--	3.60	--	--	375
15S/13E-1N 1 M 8-15-51 5000		90	7.8	1740	--	--	350 15.22	--	0	164 2.69	560 11.66	95 2.66	--	--	1.90	--	--	195
15S/13E-2N 1 M 8-15-51 5000		90	7.6	1740	--	--	285 12.39	--	0	160 2.62	690 14.37	85 2.40	--	--	1.80	--	--	210
15S/13E-8N 1 M 8-15-51 5000		98	7.6	2797	--	--	644 28.00	--	0	242 3.97	1320 27.48	200 5.64	--	--	4.10	--	--	300
15S/13E-16N 1 M 8-15-51 5000		99	7.9	1650	--	--	--	--	0	198 3.25	540 11.24	90 2.54	--	--	--	--	--	155
15S/13E-26Q 2 M 8-31-51 5000		86	8.3	1040	16 0.80 7	5 0.41 4	220 9.57 88	2 0.05	0	330 5.41 50	215 4.48 41	33 0.93 9	0.2	0.2	1.80	74	729	61
15S/14E-4M 1 M 8-14-51 5000		87	7.5	1780	--	--	340 14.78	--	0	164 2.69	610 12.70	90 2.54	--	--	2.00	--	--	120
15S/14E-6H 1 M 8-14-51 5000		78	7.6	1540	--	--	205 8.91	--	0	186 3.05	590 12.28	50 1.41	--	--	2.40	--	--	250
15S/14E-7H 1 M 8-14-51 5000		88	7.6	1770	--	--	320 13.91	--	0	156 2.56	650 13.53	100 2.82	--	--	2.00	--	--	160

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TABLE E-2
 MINERAL ANALYSES OF GROUND WATER
 CONFINED AQUIFER
 FRESNO - MADERA AREA

State Well Number	Temp. when Sampled °F	H _p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million						
				Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluor- ide F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
15S/14E-15E 4 M 12-22-50 5001	65	--	1100	20 1.00	5 0.41	220 9.57	0.13	0	130 2.13	340 7.08	61 1.72	--	--	--	--	720	71
15S/14E-30E 1 M 8-14-51 5000	87	7.5	1600	--	--	275 11.96	--	0	134 2.20	680 14.16	45 1.27	--	--	2.10	--	--	265
15S/14E-31N 2 M 8-14-51 5000	93	7.9	1340	--	--	245 10.65	--	0	140 2.29	580 12.08	40 1.13	--	--	2.00	--	--	160
15S/14E-36Q 2 M 8-14-51 5050	88	7.4	1880	--	--	320 13.91	--	--	124 2.03	640 13.32	85 2.40	--	--	1.90	--	--	110
8-14-52 5050	88	8.1	1570	42 2.10 14	6 0.49 3	286 12.44 82	3 0.08 1	0	118 1.93 12	558 11.62 74	74 2.09 13	0.0	0.7	1.80	30	1060	150
7-8-53 5050	86	7.5	1530	44 2.20 14	11 0.90 6	290 12.61 80	3 0.08 1	0	110 1.80 11	547 11.39 72	93 2.62 17	0.0	0.6	1.30	30	1074	155
7-28-55 5050	88	--	1580	--	--	306 13.30	--	--	--	--	77 2.17	--	--	2.20	--	--	--
10-12-55 5050	88	--	1550	--	--	288 12.52	--	--	--	--	74 2.09	--	--	--	--	--	127
6-26-56 5050	88	--	1640	--	--	325 14.13	--	--	--	--	85 2.40	--	--	2.30	--	--	112
7-31-57 5050	87	--	1530	--	--	281 12.22	--	--	--	--	72 2.03	--	--	2.00	--	--	136

MINERAL ANALYSES OF GROUND WATER

FRESNO - MADERA AREA

State Well Number		Temp when Sampled °F	pH	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in							milligrams per liter equivalents per million percent reactance value						Mineral constituents in parts per million					TOTAL hardness as CaCO ₃
Date Sampled Time	Agy. Coll.				Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boron B	Sili- ca SiO ₂	IDS Computed Evap 180°C						
15S/14E-36Q 2 M 6-25-58 5050		89	7.5	1580	35 1.75 12	5 0.41 3	289 12.57 85	2 0.05	0	114 1.87 12	518 10.78 71	85 2.40 16	2.6 0.04	0.8	1.60	28	1023	108					
9-27-61 5125	-36Q 2 M	87	8.0	1650	38 1.90 12	1 0.08 1	308 13.39 87	2 0.05	0	264 4.33 28	419 8.72 56	91 2.57 16	0.1	0.8	2.10	32	1024	99					
7-31-62 5050	-36Q 2 M	88	--	1640	--	--	274 11.91	2 0.05	--	--	564 11.74	86 2.43	--	--	2.20	--		130					
8-13-63 5050	-36Q 2 M	87	--	1650	--	--	301 13.09	--	--	--	--	84 2.37	--	--	2.00	--		133					
16S/14E-2J 1 M 8-23-51 5050		88	8.5	1780	66 3.29 17	17 1.40 7	335 14.57 75	2 0.05	0	124 2.03 11	703 14.64 79	68 1.92 10	1.5 0.02	0.7	2.74	40	1297	235					
16S/14E-14N 1 M 8-15-51 5050		88	7.4	1540	109 5.44	37 3.04	180 7.83	--	0	134 2.20	652 13.57	40 1.13	--	--	1.50	--		424					
8-14-52 5050	-14N 1 M	88	8.1	1580	115 5.74 34	32 2.63 16	190 8.26 49	4 0.10 1	0	134 2.20 13	658 13.70 81	37 1.04 6	0.3	0.2	1.90	31	1135	419					
16S/14E-23N 1 M 8-15-51 5050		87	7.5	1790	138 6.89	62 5.10	195 8.48	--	0	160 2.62	756 15.74	63 1.78	--	--	1.30	--		600					
16S/15E-20G 3 M 8-15-51 5050		84	7.1	1370	57 2.84	24 1.97	210 9.13	--	0	129 2.11	499 10.39	56 1.58	--	--	2.20	--		241					
16S/15E-23F 1 M 8-15-51 5050		78	7.2	1770	109 5.44	73 6.00	188 8.17	--	0	153 2.51	714 14.87	95 2.68	--	--	1.30	--		572					

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TABLE E-2
 CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
 FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	H _p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carbon- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chloride Cl	Ni- trate NO ₃	Fluoride F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180° C	TOTAL hardness as CaCO ₃
16S/15E-31Q 1 M 8-14-51 5050		84	7.3	1380	64 3.19	50 4.11	186 8.09	--	0	158 2.59	505 10.51	56 1.64	--	--	2.10	--	--	365
17S/15E-5Q 1 M 8-14-51 5050		76	7.4	1770	100 4.99	135 11.10	136 5.91	--	0	228 3.74	736 15.32	64 1.80	--	--	1.10	--	--	805
17S/15E-6M 1 M 8-14-51 5050		81	7.6	1370	80 3.99	103 8.47	91 3.96	--	0	234 3.84	475 9.89	67 1.89	--	--	0.50	--	--	623
17S/15E-6N 1 M 8-22-51 5000		85	8.5	1620	98 4.89 25	90 7.40 38	160 6.96 36	4 0.10 1	0	204 3.34 17	672 13.99 72	77 2.17 11	1.5 0.02	0.0	0.40	33	1236	615
17S/15E-6Q 1 M 8-14-51 5050		84	7.3	1770	92 4.59	74 6.09	215 9.35	--	0	176 2.88	713 14.84	84 2.37	--	--	1.70	--	--	534
17S/15E-7N 1 M 8-14-51 5050		76	7.5	1730	91 4.54	141 11.60	104 4.52	--	0	226 3.70	658 13.70	102 2.88	--	--	0.60	--	--	808
17S/15E-8N 1 M 8-14-51 5050		77	7.3	1760	94 4.69	138 11.35	114 4.96	--	0	226 3.70	680 14.16	100 2.82	--	--	0.80	--	--	803
17S/15E-8P 1 M 8-14-51 5050		77	7.4	1810	92 4.59	132 10.86	156 6.78	--	0	228 3.74	734 15.28	84 2.37	--	--	0.90	--	--	773
17S/15E-13N 1 M 8-14-51 5050		102	7.3	1870	33 1.65	9 0.74	400 17.39	--	0	148 2.43	616 12.83	126 3.55	--	--	2.30	--	--	120
17S/15E-14F 1 M 8-14-51 5050		88	7.3	1810	54 2.69	43 3.54	300 13.04	--	0	194 3.18	617 12.85	108 3.05	--	--	2.70	--	--	312

MINERAL ANALYSES OF GROUND WATER

FRESNO - MADEIRA AREA

State Well Number			Temp. when Sampled °F	H p	Specific conductance (microhmhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million							
Date Sampled Time	Agy. Coll.	Calcium Ca				Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulfate SO ₄	Chloride Cl	Nitrate NO ₃	Fluoride F	Boron B	Silica SiO ₂	TDS Computed Evap 180°C CaCO ₃			
17S/15E-14E 1 M 8-13-52 5050			90	8.3	1750	50 2.50 14	41 3.37 19	280 12.17 67	0.08	3	0	178 2.92 16	596 12.41 68	105 2.96 16	3.1 0.05	0.6	2.20	30	1198	294
17S/15E-15N 1 M 8-14-51 5050			86	7.2	1820	75 3.74	46 3.78	245 10.65	--	--	0	153 2.51	695 14.47	88 2.48	--	--	3.10	--	--	376
17S/15E-16N 1 M 8-13-52 5050			88	7.8	1790	72 3.59 20	41 3.37 18	260 11.30 62	4 0.10 1	4	0	142 2.33 12	671 13.97 75	85 2.40 13	2.6 0.04	0.4	3.00	27	1236	346
8-5-59 5050			86	7.9	1600	59 2.94 16	50 4.11 23	246 10.70 60	4 0.10 1	4	0	168 2.75 15	597 12.43 70	90 2.54 14	5.0 0.08	0.5	0.27	32	1166	353
17S/15E-16N 1 M 8-14-51 5050			78	7.4	2160	117 5.84	139 11.43	186 8.09	--	--	0	213 3.49	881 18.34	146 4.12	--	--	1.30	--	--	864
8-13-52 5050			78	8.1	2290	125 6.24 23	132 10.86 40	221 9.61 36	5 0.13	5	0	196 3.21 12	900 18.74 71	158 4.46 17	10.0 0.16 1	0.4	1.90	35	1683	806
17S/15E-16Q 1 M 8-14-51 5050			80	8.2	2020	109 5.44	110 9.05	182 7.91	--	--	0	198 3.25	840 17.49	122 3.44	--	--	2.20	--	--	725
17S/15E-18K 1 M 8-22-51 5000			78	8.0	1760	79 3.94 19	121 9.95 47	166 7.22 34	3 0.08	3	0	234 3.84 19	645 13.43 66	105 2.96 15	6.6 0.11 1	0.4	1.16	36	1278	695
17S/15E-20N 1 M 8-14-51 5050			77	7.3	1670	69 3.44	167 13.73	165 7.17	--	--	0	264 4.33	626 13.03	76 2.14	--	--	1.50	--	--	859
17S/15E-21M 1 M 8-14-51 5050			78	7.1	2540	138 6.89	162 13.32	200 8.70	--	--	0	209 3.43	988 20.57	229 6.46	--	--	1.90	--	--	1011

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TABLE E-2
 CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
 FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	H p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value							Mineral constituents in parts per million					
					Calcium Ca	Magne-sium Mg	Sodium Na	Potas-sium K	Carbon-ate CO ₃	Bicar-bonate HCO ₃	Sulfate SO ₄	Chlor-ide Cl	Ni-trate NO ₃	Fluo-ride F	Baron B	Sili-ca SiO ₂	TDS Computed Evap 180° C
17S/15E-210 1 M 8-14-51 5050		80	7.3	2450	129 6.44	154 12.66	200 8.70	--	0	216 3.54	947 19.72	225 6.35	--	--	2.00	--	956
17S/15E-22B 1 M 8-14-51 5050		84	7.1	2220	129 6.44	107 8.80	200 8.70	--	0	189 3.10	838 17.45	162 4.57	--	--	2.00	--	763
17S/15E-23N 1 M 8-14-51 5050		88	7.2	1800	79 3.94	60 4.93	245 10.65	--	0	164 2.69	711 14.80	109 3.07	--	--	3.00	--	444
-23N 1 M 8-13-52 5050		88	7.7	1780	77 3.84 20	55 4.52 24	245 10.65 56	4 0.10 1	0	164 2.69 14	644 13.41 70	108 3.05 16	0.1	0.4	2.50	30	1247 418
17S/15E-27B 1 M 8-14-51 5050		84	7.3	2150	113 5.64	101 8.31	230 10.00	--	0	216 3.54	823 17.13	170 4.79	--	--	2.70	--	698
17S/15E-27K 1 M 8-14-51 5050		88	7.0	2500	109 5.44	69 5.67	365 15.87	--	0	200 3.28	1030 21.44	158 4.46	--	--	4.60	--	556
17S/15E-27Q 1 M 8-14-51 5050		83	7.1	3280	202 10.08	152 12.50	355 15.44	--	0	178 2.92	1420 29.56	265 7.47	--	--	3.70	--	1150
17S/15E-27R 1 M 8-14-51 5050		86	6.9	2840	162 8.08	121 9.95	340 14.78	--	0	175 2.87	1190 24.78	217 6.12	--	--	3.70	--	902
17S/15E-35M 1 M 8-14-51 5050		86	6.9	3220	210 10.48	128 10.53	385 16.74	--	0	158 2.59	1410 29.36	232 6.54	--	--	4.20	--	1051
17S/16E-26N 1 M 8-15-51 5050		86	7.0	1300	54 2.69	8 0.66	230 10.00	--	0	94 1.54	484 10.08	76 2.14	--	--	1.50	--	168

MINERAL ANALYSES OF GROUND WATER

FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	H _p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million					
Date Sampled Time	Agy. Call.				Calcium Ca	Magne-sium Mg	Sodium Na	Potas-sium K	Carbon-ate CO ₃	Bicar-bonate HCO ₃	Sulfate SO ₄	Chlo-ride Cl	Ni-trate NO ₃	Fluo-ride F	Boron B	Sili-ca SiO ₂	IDS Computed Evap 180 °C	TOTAL hardness as CaCO ₃
17S/16E-29N 1 M 8-15-51 5050		88	6.8	1360	54 2.69	7 0.58	220 9.57	--	0	57 0.93	504 10.49	76 2.14	--	--	1.80	--	164	
17S/16E-30A 4 M 7-26-52 5001		93	--	2000	74 3.69 20	3 0.25 1	340 14.78 78	5 0.13 1	15 0.50 3	25 0.41 2	640 13.32 71	160 4.51 24	0.2	--	--	1249	197	
--30A 4 M 10-28-52 5001		80	--	4000	--	--	--	--	--	--	--	--	--	--	--	--	--	
17S/16E-30A 5 M 7-26-52 5001		92	--	1400	33 1.65 13	2 0.16 1	260 11.30 86	2 0.05	0	70 1.15 9	490 10.20 77	70 1.97 15	0.2	--	--	892	91	
17S/16E-30A 6 M 7-26-52 5001		85	--	1900	33 1.65 9	2 0.16 1	360 15.65 89	2 0.05	0	110 1.80 10	320 6.66 37	330 9.31 52	0.2	--	1.20	1102	91	
17S/16E-30N 1 M 8-14-51 5050		90	6.9	1730	81 4.04	19 1.56	270 11.74	--	0	79 1.29	650 13.53	99 2.79	--	--	1.50	--	280	
17S/16E-32N 1 M 8-15-51 5050		93	6.9	1710	74 3.69	10 0.82	295 12.83	--	0	83 1.36	634 13.20	102 2.88	--	--	2.20	--	226	
--32N 1 M 8-13-52 5050		92	7.7	1700	71 3.54 21	11 0.90 5	281 12.22 73	2 0.05	0	80 1.31 8	630 13.12 76	101 2.85 16	0.1	0.5	2.20	28	1166	222
17S/16E-33N 1 M 8-15-51 5050		101	6.7	1630	36 1.80	4 0.33	330 14.35	--	0	80 1.31	500 10.41	140 3.95	--	--	1.80	--	107	
17S/17E-31Q 1 M 8-15-51 5050		85	6.8	1150	54 2.69	12 0.99	175 7.61	--	0	86 1.41	428 8.91	41 1.16	--	--	0.80	--	184	

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TABLE E-2
 CONFINED AQUIFER
MINERAL ANALYSES OF GROUND WATER
 FRESNO - MADERA AREA

State Well Number		Temp. when Sampled °F	H _p	Specific conductance (micro-mhos at 25°C)	Mineral Constituents in milligrams per liter equivalents per million percent reactance value								Mineral constituents in parts per million				
					Calcium Ca	Magne- sium Mg	Sodium Na	Potas- sium K	Carban- ate CO ₃	Bicar- bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni- trate NO ₃	Fluo- ride F	Boron B	Sili- ca SiO ₂	TDS Computed Evap 180° CaCO ₃
17S/17E-33N80 M 9-25-29 5050		86	--	984	29 1.45	0	180 7.83	--	0	67 1.10	351 7.31	32 0.90	--	0.95	--	--	73

TABLE E-3
QUALITY OF GROUND WATERS IN CALIFORNIA
SAN JOAQUIN DISTRICT
TRACE ELEMENT ANALYSES OF GROUND WATER

State Well Number	Use	Date	Constituents in Parts Per Billion																
			Alumi- num (Al)	Arsenic (As)	Beryl- lium (Be)	Bismuth (Bi)	Cadmium (Cd)	Cobalt (Co)	Chro- mium (Cr)	Copper (Cu)	Iron (Fe)	Gallium (Ga)	Germa- nium (Ge)	Manga- nese (Mn)	Molyb- denum (Mo)	Nickel (Ni)	Lead (Pb)	Titanium (Ti)	Vanadium (V)
11S/14E-33P1-M	Irr.	9/ 4/64								0.00									
11S/17E-25B1-M	Mun.	3/19/64	0.00																
12S/14E-27D2-M	Dom.	9/ 4/64								10									
14S/25E-35Q51-M	Spring	6/10/64	15		< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	73	< 5.7	< 0.29	17	7.1	1.9	< 1.4	< 0.57	57	< 5.7
14S/26E-32H51-M	Spring	6/24/64	47		< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	90	< 5.7	< 0.29	16	< 0.29	2.3	< 1.4	< 0.57	21	< 5.7
15S/17E-10R1-M	Irr.	7/28/64	80							20			0.0						
15S/25E-3DS1-M	Spring	6/10/64	86		< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	100	< 5.7	< 0.29	24	< 0.29	2.0	< 1.4	6.9	29	< 5.7
17S/23E-8J2-M	Dom.	3/26/64	40																
21S/16E-1N1-M	Abund.	3/17/64	< 3.3		< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	> 270	< 13	< 0.67	80	< 0.67	2.5	< 3.3	< 1.3	< 0.67	< 13
21S/16E-2R1-M	Irr.	3/18/64	< 3.3		< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	6.7	< 13	< 0.67	9.3	< 0.67	2.5	< 3.3	< 1.3	< 0.67	< 13
21S/18E-17M1-M	Irr.	5/21/64	30																
21S/22E-22M2-M	Dom.	4/14/64	10																
24S/22E-35N1-M	Irr & Stock	7/29/64	35	190	< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	35	< 13	< 3.3	20	20	1.2	< 3.3	< 1.3	< 0.67	15
26S/27E-901-M	Dom & Stock	8/26/64	8.7	10	< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	15	< 13	< 0.67	< 3.3	14	1.4	< 3.3	< 1.3	< 0.67	< 13
29S/27E-21R1-M	Dom.	2/ 7/64									0.0								
29S/29E-34N1-M	Dom.	12/17/63	3.7		< 1.5	< 0.77	< 3.8	< 3.8	< 3.8	9.2	< 15	2.4	25	5.4	3.1	< 3.8	< 1.5	< 0.77	< 15
32S/29E-35N1-M	Irr.	8/28/64		0															
32S/31E-36C1-M	Dom.	2/ 3/64	< 3.3		< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	4.7	< 13	< 0.67	7.1	7.9	1.2	< 3.3	< 1.3	5.7	< 13
32S/32E-13P1-M	Dom.	11/18/63	10		< 1.0	< 0.50	< 2.5	< 2.5	< 2.5	10	< 10	< 0.50	< 2.5	4.0	1.0	< 2.5	< 1.0	7.0	< 10
32S/32E-26Q1-M	Irr.	11/18/63	1.4		< 1.0	< 0.50	< 2.5	< 2.5	< 2.5	5.0	< 10	< 0.50	< 2.5	9.0	1.4	< 2.5	< 1.0	9.0	< 10
32S/32E-28H1-M	Stock	11/18/63	3.9		< 1.0	< 0.50	< 2.5	< 2.5	< 2.5	14	< 10	< 0.50	< 2.5	< 0.50	0.80	< 2.5	< 1.0	15	< 10
32S/32E-34D2-M	Dom.	2/ 3/64	< 3.3		< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	< 3.3	< 13	< 0.67	17	< 0.67	0.86	< 3.3	< 1.3	< 0.67	667
32S/33E-27D2-M	Dom.	11/18/63	6.0		< 1.0	< 0.50	< 2.5	< 2.5	< 2.5	< 24	< 10	< 0.50	< 2.5	< 0.50	2.7	< 2.5	< 1.0	4.2	< 10
32S/33E-29P1-M	Irr.	12/ 9/63	1.8		< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	1.7	< 13	< 0.67	< 3.3	8.0	1.3	< 3.3	< 1.3	< 0.67	< 13
32S/34E-34B1-M	Dom.	2/ 3/64	< 3.3		< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	4.9	< 13	< 0.67	11	3.1	1.7	< 3.3	< 1.3	2.7	< 13

> More than the amount indicated.
< Less than the amount indicated.

TABLE E-4

QUALITY OF GROUND WATERS IN CALIFORNIA

SAN JOAQUIN DISTRICT

ANALYSES OF MISCELLANEOUS CONSTITUENTS

STATE WELL NUMBER	DATE	CONSTITUENTS IN PARTS PER MILLION (ppm)		
		Alkyl- Benzene- Sulfonate (ABS)	Lithium (Li)	Nutrients ^{1/}
4S/ 9E-22C1 -M	6-30-64	4.6	0.00	NH ₄ as N - 0.00 NO ₂ as N - 0.00 NO ₃ as N - 11 Organic N as N - 0.1
13S/20E-30Q1 -M	6-11-64	0.0		
30Q2 -M	6-11-64	0.0		
21S/27E-21K1 -M	8-11-64	0.0		
22E1 -M	8-11-64	0.1		
22J1 -M	8-11-64	0.0		
23L1 -M	8-11-64	0.0		
26F2 -M	8-11-64	0.0		
26P1 -M	8-11-64	0.0		
27C1 -M	8-10-64	0.0		
27F1 -M	8-12-64	1.9		NH ₄ as N - 0.01 NO ₂ as N - 0.00 NO ₃ as N - 9.7 Organic N as N - 0.5 Organic & Total PO ₄ -
27G1 -M	8-10-64	0.0		
27L1 -M	8-10-64	0.0		Organic & Total PO ₄ -
27R1 -M	8-11-64	0.0		
28A1 -M	8-10-64	0.0		
28K1 -M	8-11-64	0.0		
28N1 -M	8-11-64	0.0		
34B1 -M	8-11-64	0.0		
34D1 -M	8-11-64	0.0		
26S/27E- 9G1 -M	8-26-64		0.18	

^{1/} Ammonium (NH₄), Nitrite (NO₂), Nitrate (NO₃), Nitrogen (N), Phosphate (PO₄)

TABLE E-4

QUALITY OF GROUND WATERS IN CALIFORNIA

SAN JOAQUIN DISTRICT

ANALYSES OF MISCELLANEOUS CONSTITUENTS

STATE WELL NUMBER	DATE	CONSTITUENTS IN PARTS PER MILLION (ppm)		
		Alkyl- Benzene- Sulfonate (ABS)	Lithium (Li)	Nutrients ^{1/}
28S/24E- 1F1 -M	6-23-64		0.00	
2B1 -M	6-23-64		0.00	
2P1 -M	6-23-64		0.00	
3N1 -M	6-23-64		0.00	
6F1 -M	7- 9-64		0.00	
7B1 -M	7- 9-64		0.00	
9H1 -M	7- 9-64		0.00	
11F3 -M	7- 9-64		0.00	
12A1 -M	6-23-64		0.00	
16A1 -M	6-23-64		0.00	
32P1 -M	6-23-64		0.00	
36R1 -M	6-24-64		0.00	
28S/25E- 2A1 -M	6-23-64		0.00	
4F1 -M	7- 9-64		0.00	
4P2 -M	6-23-64		0.00	
20D1 -M	6-23-64		0.00	
24P1 -M	6-25-64		0.08	
25L1 -M	6-24-64		0.00	
32P1 -M	6-24-64		0.00	
29S/24E- 4D1 -M	6-23-64		0.00	
7C1 -M	6-23-64		0.00	
21B1 -M	6-23-64		0.00	
24F1 -M	6-24-64		0.00	
33P3 -M	7- 9-64		0.02	

^{1/} Ammonium (NH₄), Nitrite (NO₂), Nitrate (NO₃), Nitrogen (N), Phosphate (PO₄)

TABLE E-4

QUALITY OF GROUND WATERS IN CALIFORNIA

SAN JOAQUIN DISTRICT

ANALYSES OF MISCELLANEOUS CONSTITUENTS

STATE WELL NUMBER	DATE	CONSTITUENTS IN PARTS PER MILLION (ppm)		
		Alkyl- Benzene- Sulfonate (ABS)	Lithium (Li)	Nutrients ^{1/}
29S/25E- 3N1-M	6-24-64		0.00	
10N1-M	6-24-64		0.00	
12N1-M	6-23-64		0.00	
13R1-M	7- 9-64		0.00	
32F1-M	7- 8-64		0.00	
30S/24E- 3E1-M	6-24-64		0.00	
5L2-M	6-24-64		0.03	
6H1-M	6-24-64		0.02	
8P1-M	8-28-64		0.09	
11G1-M	6-25-64		0.00	
11J1-M	6-24-64		0.00	
15D1-M	6-24-64		0.02	
30S/25E- 1H1-M	6-25-64		0.00	
2A1-M	6-23-64		0.02	
2K1-M	6-23-64		0.00	
7P1-M	6-23-64		0.00	
8P1-M	6-23-64		0.00	
9A1-M	6-23-64		0.00	
14H1-M	7- 7-64		0.00	
26A1-M	7- 7-64		0.01	
31P1-M	6-25-64		0.00	
32S/29E-35M1-M	8-28-64		0.01	

^{1/} Ammonium (NH₄), Nitrite (NO₂), Nitrate (NO₃), Nitrogen (N), Phosphate (PO₄)

QUALITY OF GROUND WATERS IN CALIFORNIA

SAN JOAQUIN DISTRICT

KERN COUNTY PIEZOMETER SAMPLING PROGRAM

STATE WELL NUMBER	DEPTH TO WATER (FT.)	PUMP TIME (HRS.-MIN.)	E.C. ^d	PUMP RATE (GPM.)	REMARKS
<u>25S/23E-28</u>					
-D1-M	40.4	1 --	1380 ^b /	5/50 ^{a,b} /	
-D2-M	111.0	1 --	1125 ^b /	5/9 ^{a,b} /	
-D3-M	190.0	1 10	192	5/3	Sampled
<u>25S/24E-15</u>					
-H1-M	87.5	1 --	1650	5/9	Water muddy sampled
-H2-M	139.0	1 --	1100 ^b /	5/11 ^{a,b} /	
-H3-M	--	- --	--	--	Dry at 175'. Obstruction
<u>25S/25E/22</u>					
-D1-M	172.7	- 40	595	5/2	Sampled
-D2-M	168.0	- 40	350	5/2	Sampled
<u>25S/26E-16</u>					
-P1-M	114.0	1 30	400	5/9	Sampled
-P2-M	243.0	1 20	275	5/6	Sampled
<u>27S/23E-1</u>					
-R1-M	112.7	18 30 ^c /	3100	5/105	Sampled
-R3-M	210.0	21 -- ^c /	200	5/90	Sampled
-R4-M	206.6	20 30 ^c /	185	5/7,5/40	Two rates due to different pumping depths - sampled
-R5-M	201.2	22 30 ^c /	235	5/9,5/6	Two rates due to different pumping depths - sampled
<u>27S/24E-1</u>					
-L2-M	220.6	1 --	430	5/4	Sampled
-L3-M	223.1	- 45	140	5/15	Sampled
-L4-M	221.9	1 --	140	5/3	Sampled
<u>27S/25E-1</u>					
-N1-M	119.9	2 40	390	5/13	Sampled
-N3-M	261.0	2 30	130	5/11	Sampled
<u>28S/22E-9</u>					
-D1-M	27.2	- 45	3700	5/2	Sampled
-D2-M	33.5	- 45	4300	5/2	Sampled
<u>28S/24E-23</u>					
-D1-M	180.2	--	240 ^b /	5/2 ^{a,b} /	Plugged @ 300'
-D2-M	182.0	1 10	140	5/3	Sampled
-D3-M	180.1	1 --	280	5/2	Sampled
<u>28S/26E-21</u>					
-H1-M	159.0	1 30	630	5/31	
-H2-M	205.0	1 30	400	5/27	Sampled
-H3-M	239.0	- 40	400	5/4	Sampled
<u>29S/25E-12</u>					
-M3-M	142.5	- 40	150	5/2	Sampled
-M4-M	137.7	- 40	810	5/2	Sampled

a-ONLY ABLE TO PUMP 5 GALLONS

b-FIRST 5 GALLONS

c-ON AND OFF FOR THIS PERIOD

d-MICROMHOS ELECTRICAL CONDUCTIVITY= $K \times 10^6$

QUALITY OF GROUND WATERS IN CALIFORNIA

SAN JOAQUIN DISTRICT

KERN COUNTY PIEZOMETER SAMPLING PROGRAM

STATE WELL NUMBER	DEPTH TO WATER (FT.)	PUMP TIME (HRS. - MIN.)	E.C. ^d	PUMP RATE (G.P.M.)	REMARKS
<u>29S/27E-34</u>					
-N1-M	73.4	2 30	220	5/18	Sampled
-N2-M	101.4	- 45	360	5/2	Sampled
-N3-M	105.0	1 --	135	5/2	Sampled
-N4-M	114.3	1 --	200	5/17	Sampled
<u>30S/24E-4C</u>					
-C1-M	66.1	- 30	1300	5/2	Sampled
-C4-M	74.5	2 20	400	5/5	Sampled
-C5-M	88.2	1 --	108	5/3	Sampled
-C6-M	92.3	1 20	97	5/3	Sampled
<u>30S/26E-22</u>					
-P1-M	68.0	- 30	172	5/2	Sampled
-P2-M	69.6	- 35	182	5/2	Sampled
-P3-M	74.3	- 25	205	5/2	Sampled
<u>30S/28E-10</u>					
-N1-M	38.5	1 10	1100	5/6	Obstruction @ 60' - sample
-N2-M	136.7	1 20	220	5/2	Sampled
-N3-M	125.2	1 --	330	5/3	Sampled
-N4-M	144.4	- 30	220	5/4	Sampled
<u>31S/25E-27</u>					
-F1-M	33.6	1 --	2250	5/3	Sampled
-F2-M	67.9	1 25	2000	5/5	Sampled
-F3-M	68.7	1 10	880	5/4	Sampled
-F4-M	55.5	1 20	900	5/3	Sampled
<u>32S/28E-30</u>					
-D1-M	52.2	2 5	620	5/9	Sampled
-D2-M	178.2	4 20	360	5/43	Sampled
-D3-M	170.5	3 15	460	5/7	Sampled
-D4-M	217.2	- --	--	--	Would not pump
<u>32S/29E-19</u>					
-H2-M	202.0	1 20	700	5/6	Sampled
-H3-M	324.2	1 35	320	5/7	Sampled
-H4-M	326.0	- --	--	--	Obstruction - could not p
<u>11N/19W-7</u>					
-R2-S	Dry	- --	--	--	No water
-R3-S	465.2	- --	--	--	Too deep to pump
-R4-S	464.3	- --	--	--	Too deep to pump

a-ONLY ABLE TO PUMP 5 GALLONS

b-FIRST 5 GALLONS

c-ON AND OFF FOR THIS PERIOD

d-MICROMHOS ELECTRICAL CONDUCTIVITY= $K \times 10^6$

QUALITY OF GROUND WATERS IN CALIFORNIA
SAN JOAQUIN DISTRICT
WELLS INDICATING SIGNIFICANT DEVIATION IN QUALITY
FROM SURROUNDING AREA

STATE WELL NUMBER WELL USE	DEVIATION	STATUS
4S/9E-22C1-M Drainage	NO ₃ ^{1/} = 60 ppm ^{2/} ABS ^{3/} = 4.6 ppm	This well is near the Ceres Sewage Treatment Plant and appears to be affected by it. A detailed investigation will be instituted for this area.
7S/15E-30E1-M Irrigation	High EC ^{4/} 676 mu ^{5/} in 1963 879 mu in 1964 Area EC = 200 to 300 mu	Above normal EC values in ground water limited to small (1 sq. mi.) area. No source for high values could be located.
9S/9E-2L1-M Irrigation & stock	EC increasing 964 mu in 1961 1660 mu in 1962 2050 mu in 1963	Increase appears to be due to the influence of the highly mineralized perched water table
11S/10E-23K1-M Irrigation	NO ₃ = 94 ppm	Cause being investigated
12S/15E-4F1-M Irrigation	EC increasing from 380 in 1957 to 634 in 1964	Cause being investigated
12S/21E-17L1-M Irrigation	NO ₃ = 41 ppm	Cause being investigated
13S/19E-24Q1-M Irrigation	NO ₃ = 47 ppm	This well was previously polluted. Pollution abatement has resulted in a reduction of the total dissolved solids but during the same period the nitrates have increased. The reason for this will be investigated.
17S/23E-8J2(8H1) ^{6/} -M Domestic	High NO ₃ 40 ppm in 1962 Area NO ₃ = <10 ^{7/} ppm	NO ₃ concentrations in immediate area found to be greater than 100 ppm. No cause determined. Further investigation underway.

^{1/} NO₃ = Nitrate

^{2/} ppm = parts per million

^{3/} ABS = alkyl benzene sulfonate (detergent surfactant)

^{4/} EC = Electrical Conductivity in micromhos at 25°C

^{5/} mu = Micromhos

^{6/} well number in () is number previously reported

^{7/} < = less than

TABLE E-6

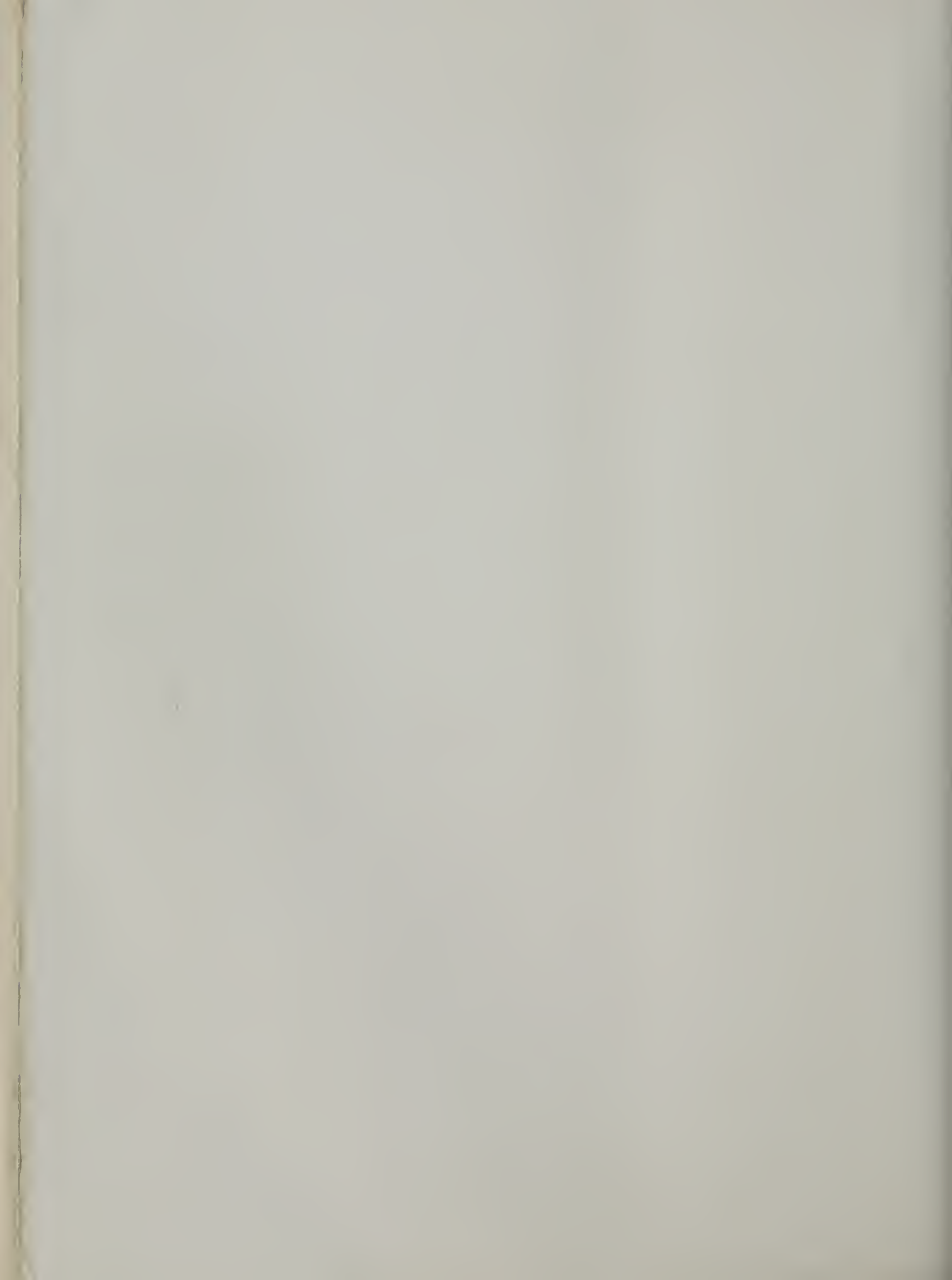
QUALITY OF GROUND WATERS IN CALIFORNIA
SAN JOAQUIN DISTRICT
WELLS INDICATING SIGNIFICANT DEVIATION IN QUALITY
FROM SURROUNDING AREA

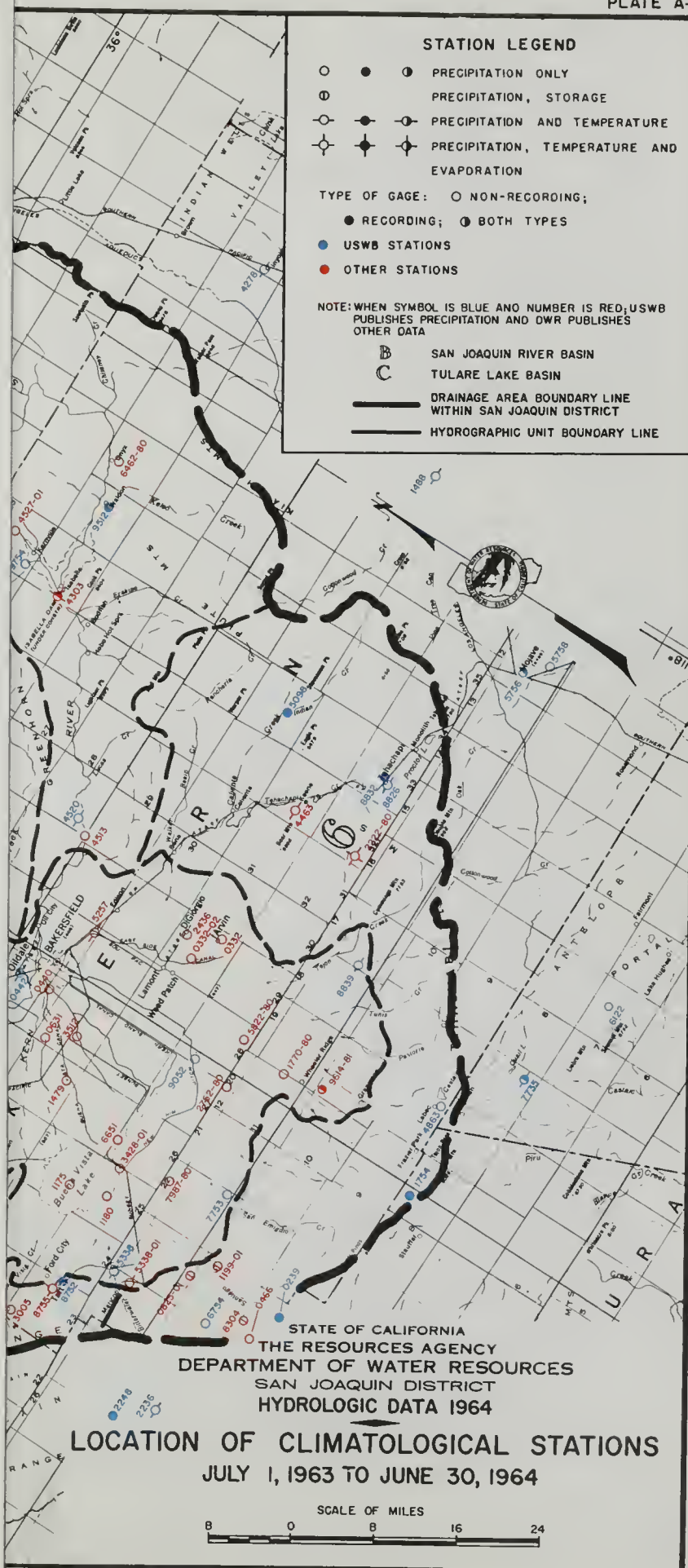
STATE WELL NUMBER WELL USE	DEVIATION	STATUS
18S/26E-10M1(10N1)-M Irrigation	High NO ₃ 78 ppm in 1963 Area NO ₃ = 10 ppm	High NO ₃ concentrations apparently caused by percolation of nitrogen supplemented irrigation water. Depth to water approximately 10 ft. NO ₃ concentrations in ground water found to be greater than 100 ppm.
18S/26E-36C1-M Domestic & irrigation	NO ₃ = 44 ppm	Cause being investigated
18S/27E-10C2-M Domestic	NO ₃ = 52 ppm	Cause being investigated
21S/27E-27F1-M	ABS = 1.9 ppm in 1964, 0.44 ppm in 1963 NO ₃ = 43 ppm	Source of ABS and high NO ₃ is Porterville Sewage Treatment Plant. ABS found in 10 wells. Office report to be published in 1965.
24S/22E-35N1-M Irrigation & stock	Arsenic = 0.19 ppm in 1964, 0.25 ppm in 1963	Cause and areal extent being investigated.
28S/25E-4F1-M Irrigation	NO ₃ = 81 ppm	Cause being investigated
28S/25E-4P2-M Domestic	NO ₃ = 47 ppm	Cause being investigated
28S/25E-9E2-M Domestic	NO ₃ = 77 ppm	Cause being investigated
28S/25E-24P1-M Domestic & irrigation	NO ₃ = 54 ppm	Cause being investigated

TABLE E-6

QUALITY OF GROUND WATERS IN CALIFORNIA
SAN JOAQUIN DISTRICT
WELLS INDICATING SIGNIFICANT DEVIATION IN QUALITY
FROM SURROUNDING AREA

STATE WELL NUMBER WELL USE	DEVIATION	STATUS
30S/28E-10N1 .M Test Well	NO ₃ = 43 ppm	This well is near the Bakersfield Sewage Treatment Plant ponds. An investigation of the area is being conducted to determine the effect of the sewage treatment plant's discharges on the ground water.
32S/29E-35M1(35M2) -M Irrigation	High NO ₃ 159 ppm in 1962 227 ppm in 1964	NO ₃ concentration greater than 60 ppm found only in small area (1 sq. mi.). Due to complex conditions no definite source found.





STATION LEGEND

- ● ○ PRECIPITATION ONLY
- ○ PRECIPITATION, STORAGE
- ○ PRECIPITATION AND TEMPERATURE
- ○ PRECIPITATION, TEMPERATURE AND EVAPORATION

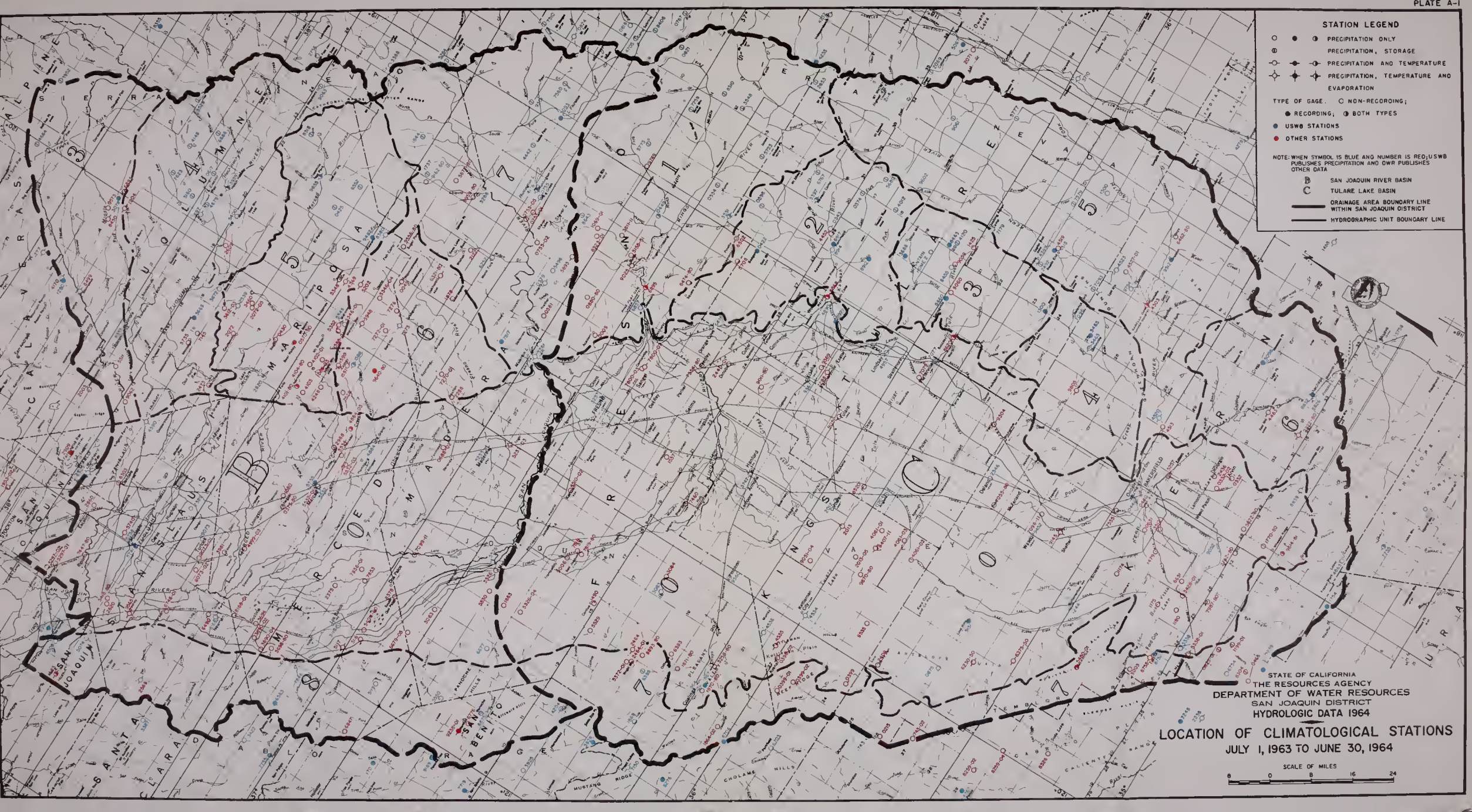
TYPE OF GAGE: ○ NON-RECORDING;
● RECORDING; ○ BOTH TYPES

● USWB STATIONS
● OTHER STATIONS

NOTE: WHEN SYMBOL IS BLUE AND NUMBER IS RED, USWB PUBLISHES PRECIPITATION AND DWR PUBLISHES OTHER DATA

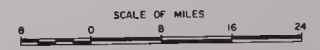
B SAN JOAQUIN RIVER BASIN
C TULARE LAKE BASIN

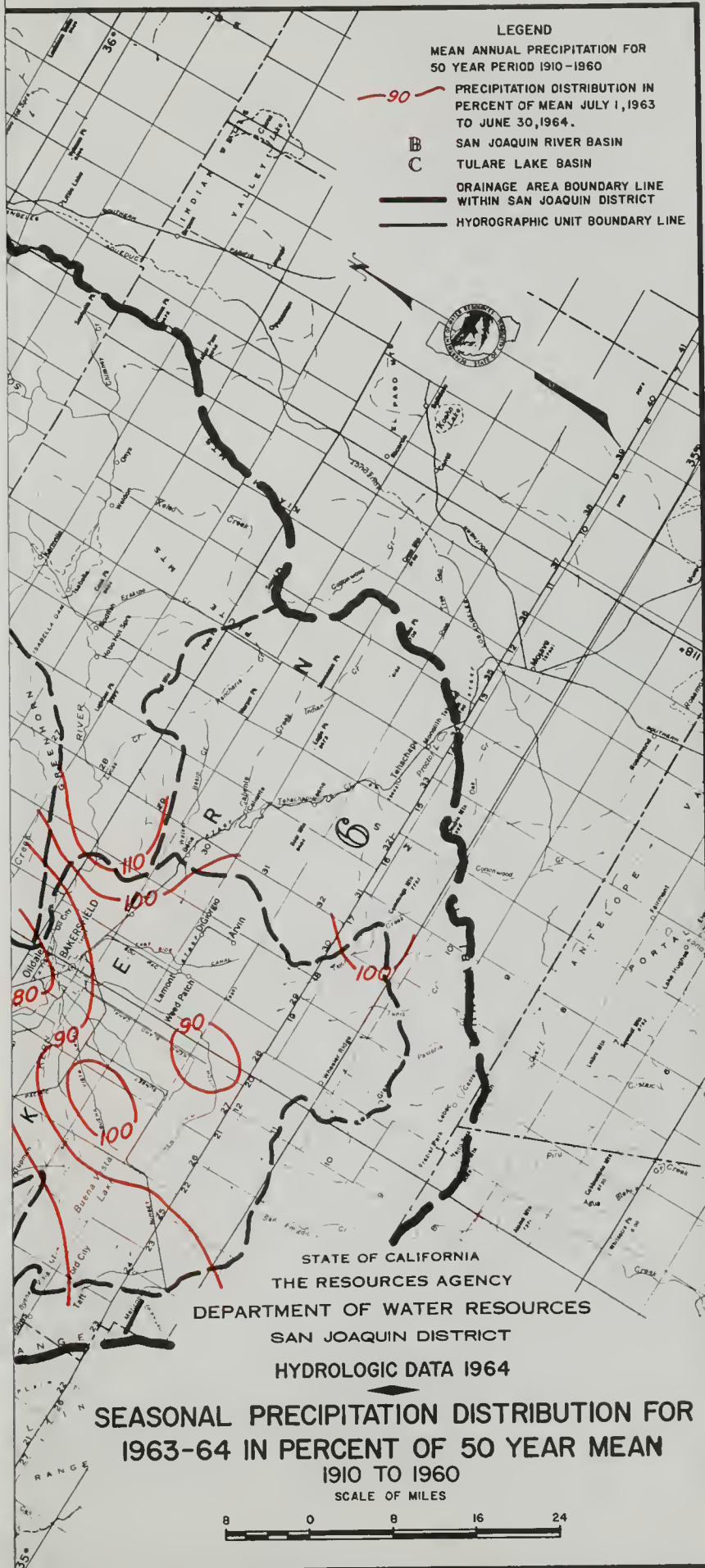
— DRAINAGE AREA BOUNDARY LINE
— HYDROGRAPHIC UNIT BOUNDARY LINE



STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN JOAQUIN DISTRICT
HYDROLOGIC DATA 1964

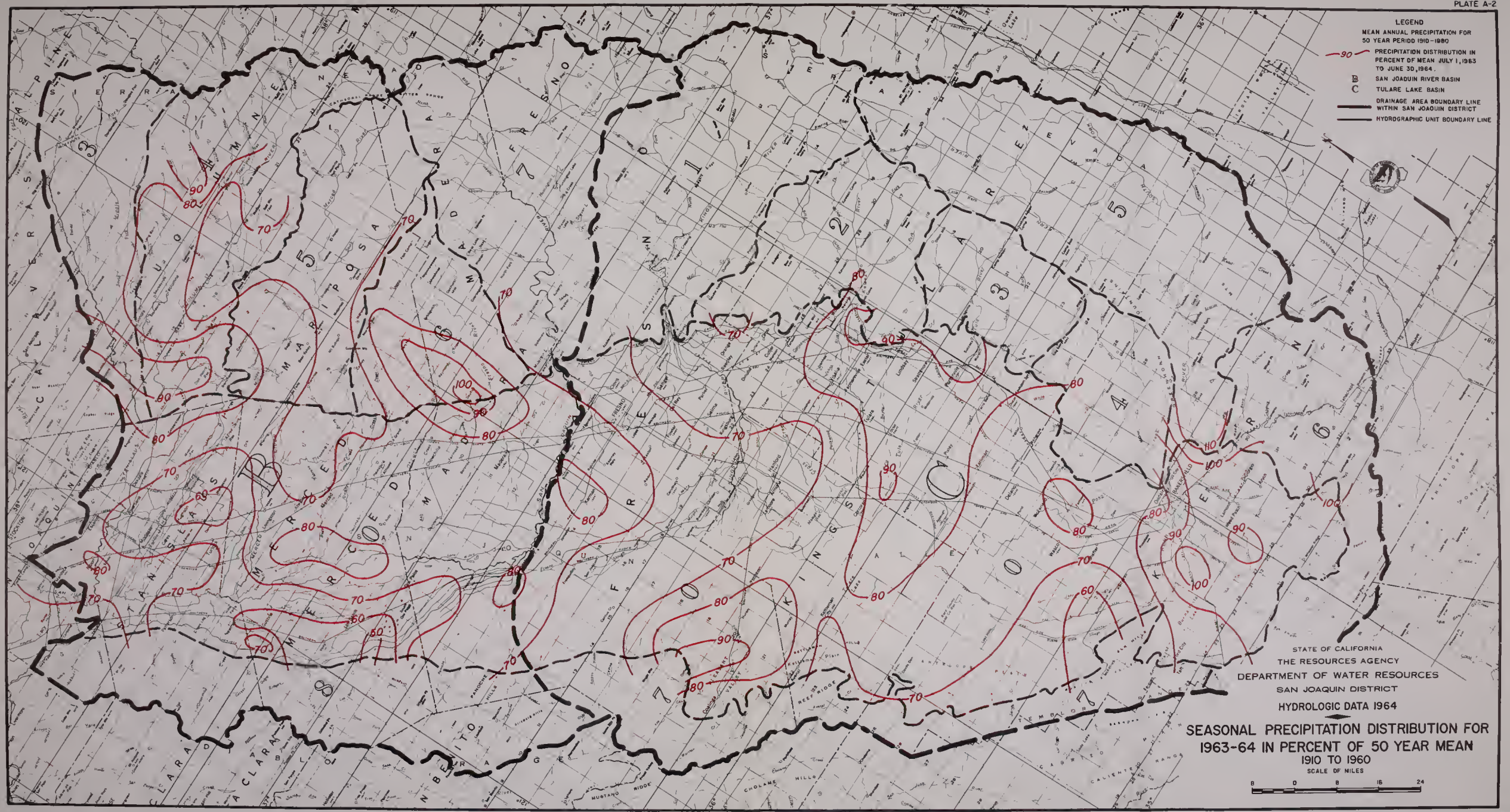
LOCATION OF CLIMATOLOGICAL STATIONS
JULY 1, 1963 TO JUNE 30, 1964







- LEGEND
- MEAN ANNUAL PRECIPITATION FOR
50 YEAR PERIOD 1900-1980
- 90— PRECIPITATION DISTRIBUTION IN
PERCENT OF MEAN JULY 1, 1963
TO JUNE 30, 1964.
- B C
SAN JOAQUIN RIVER BASIN
TULARE LAKE BASIN
- DRAINAGE AREA BOUNDARY LINE
— WITHIN SAN JOAQUIN DISTRICT
— HYDROGRAPHIC UNIT BOUNDARY LINE



STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN JOAQUIN DISTRICT
HYDROLOGIC DATA 1964

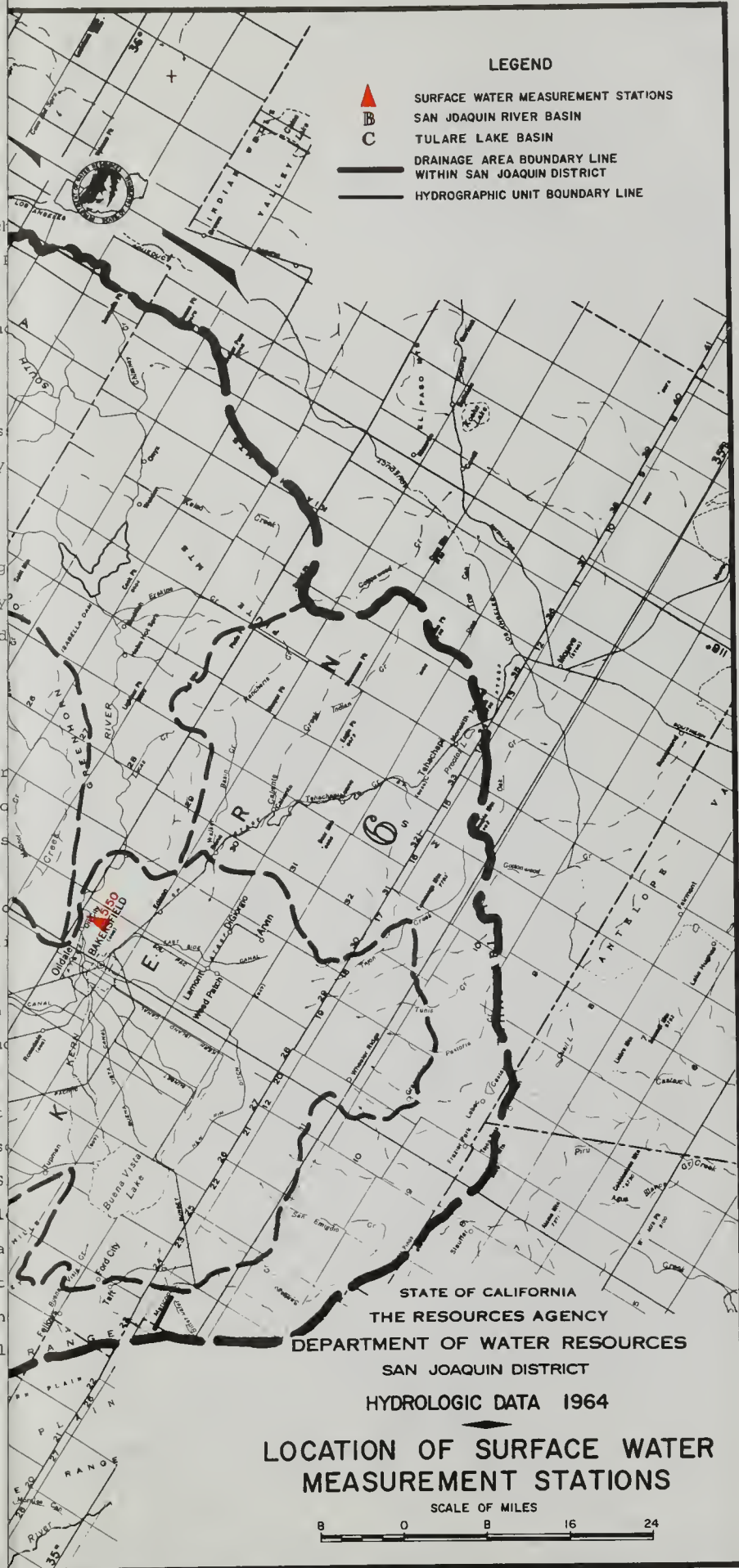
SEASONAL PRECIPITATION DISTRIBUTION FOR
1963-64 IN PERCENT OF 50 YEAR MEAN
1910 TO 1960

SCALE OF MILES

0 8 16 24

- 0 0420 Mariposa Bypass near Crane Ranch
- 0 0770 Delta-Mendota Canal to Mendota
- 0 3105 Stanislaus River near Mouth
- 0 3115 Stanislaus River at Koetitz Ranch
- 0 3125 Stanislaus River at Ripon
- 0 3145 Stanislaus River at Riverbank
- 0 3175 Stanislaus River at Orange Blossom
- 0 4105 Tuolumne River at Tuolumne City
- 0 4120 Tuolumne River at Modesto
- 0 4130 Dry Creek near Modesto
- 0 4150 Tuolumne River at Hickman Bridge
- 0 4165 Tuolumne River at Roberts Ferry
- 0 4175 Tuolumne River at LaGrange Bridge
- 0 5138 Merced River near Livingston
- 0 5155 Merced River at Cressey
- 0 5170 Merced River below Snelling
- 0 5570 Bear Creek below Bear Reservoir
- 0 6170 Owens Creek below Owens Reservoir
- 0 7020 San Joaquin River near Vernalis
- 0 7040 San Joaquin River at Maze Road
- 0 7060 San Joaquin River at Hetch Hetchy
- 0 7070 San Joaquin River at West Stanislaus
- 0 7080 San Joaquin River at Grayson
- 0 7200 San Joaquin River at Patterson
- 0 7250 San Joaquin River at Crows Landing
- 0 7300 San Joaquin River near Newman
- 0 7375 San Joaquin River near Fremont
- 0 7400 San Joaquin River near Stevens
- 0 7575 San Joaquin River above Sand Springs
- 0 7610 San Joaquin River near Dos Palos
- 0 7710 San Joaquin River near Mendota
- 0 7885 San Joaquin River below Friant
- 0 8720 Orestimba Creek near Crows Landing
- B5 1250 Maxwell Creek near Coulterville

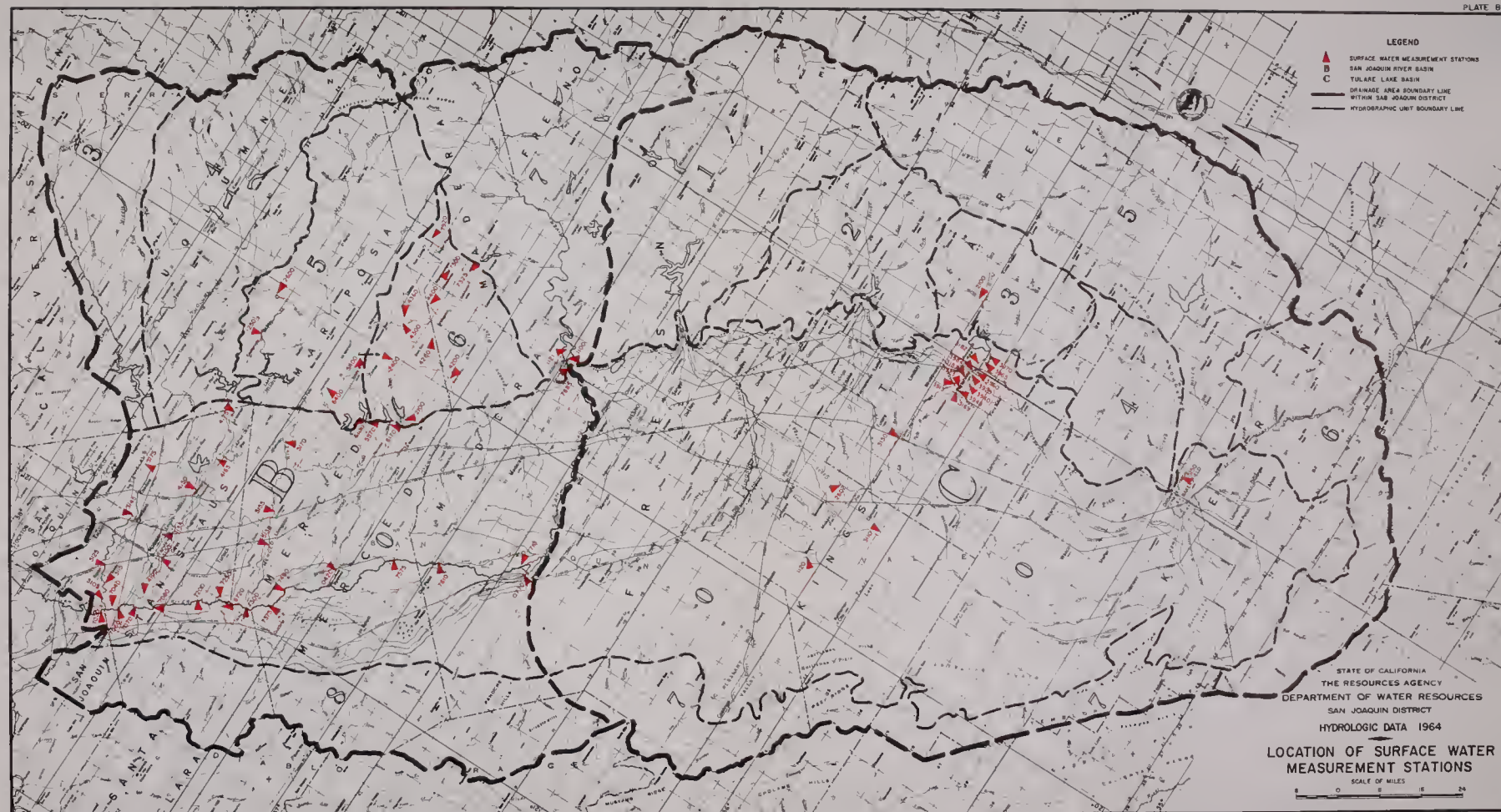
* Not shown



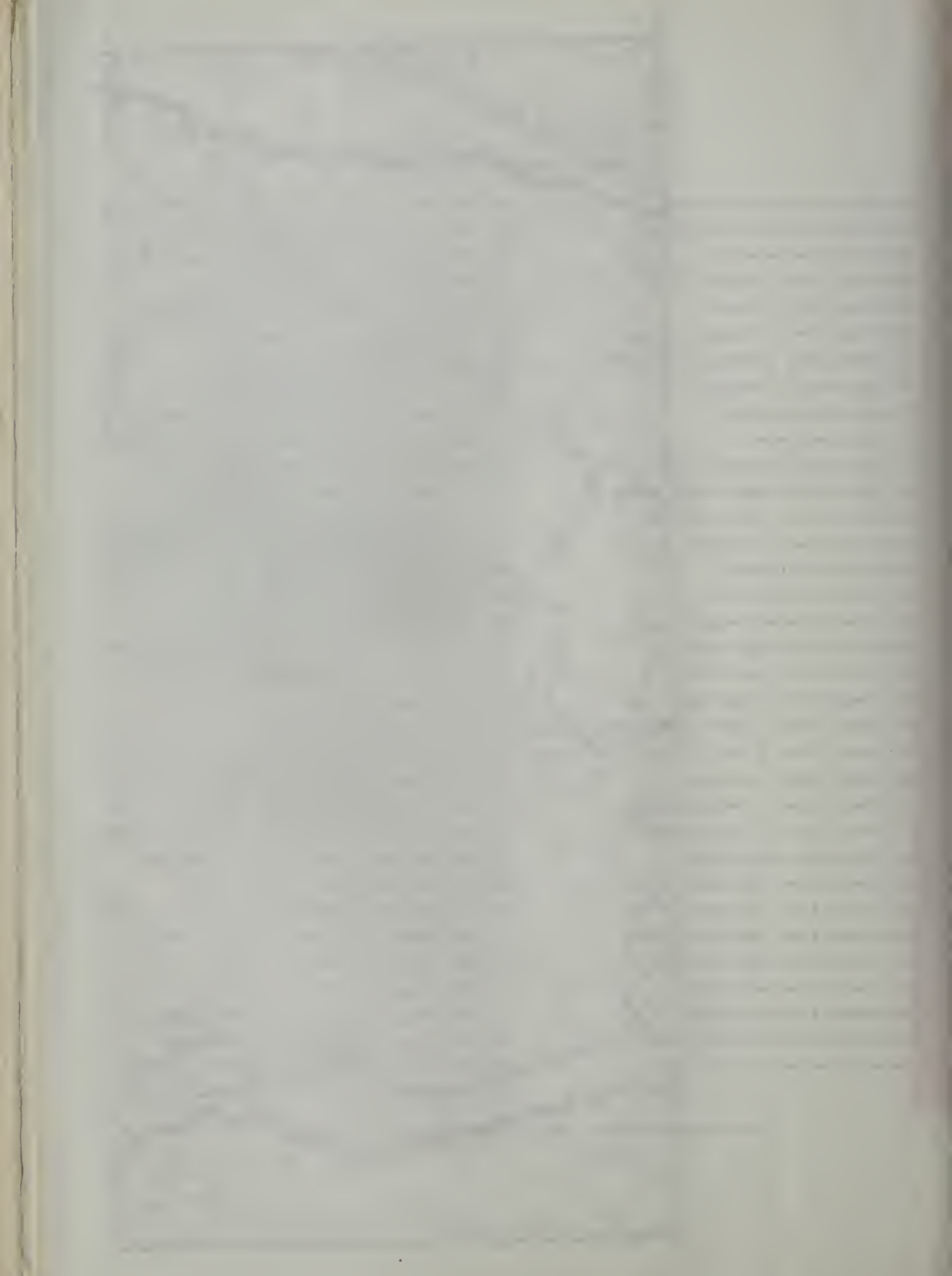
SURFACE WATER MEASUREMENT STATIONS

BO 1000 Mar 1080 River near Panch	BS 2600 North Fork Merced River near Coulterville
BO 1001 Delta-Mendota Canal at Delta Pool	BS 5400 Bear Creek near Catheys Valley
BO 1002 San Joaquin River near Mott	BS 6100 Burns Creek below Burns Reservoir
BO 1011 Stanislaus River at Kottitz Ranch	BS 6400 Burns Creek near Hornitos
BO 1021 Stanislaus River at Ripon	BS 2100 Mariposa Creek below Mariposa Reservoir
BO 1043 Stanislaus River at Riverbank	BS 2400 Mariposa Creek near Catheys Valley
BO 1057 Stanislaus River at Orange Blossom Bridge	BS 4200 Chowchilla River near Raymond
BO 41 Tuolumne River at Tuolumne City	BS 4260 Striped Rock Creek near Raymond
BO 42 Tuolumne River at Modesto	BS 4300 West Fork Chowchilla River near Mariposa
BO 4130 Dry Creek near Modesto	BS 4360 Middle Fork Chowchilla River near Nipinnawasee
BO 45 Tuolumne River at Hickman Bridge	BS 4400 East Fork Chowchilla River near Ahwahnee
BO 416 Tuolumne River at Robert Perry Bridge	BS 7300 Manti Creek near Oakhurst
BO 4195 Tuolumne River at LaGrange Bridge	BS 7325 Lewis Fork Fresno River near Oakhurst
BO 415 Merced River near Livingston	BS 7920 Big Creek Diversion near Fish Camp
BO 11 Merced River at Cressey	BS 1100 Daily Content Millerton Lake
BO 17 Merced River below Snelling	BS 1121 Inflow to Millerton Lake
BO 517 Bear Creek below Bear Reservoir	*BS 5925 Delta-Mendota Canal near Tracy
BO 130 Owens Creek below Owens Reservoir	CO 1120 South Fork Kings River below Empire Weir #2
BO 720 San Joaquin River near Vernalis	CO 2602 Cross Creek below Lakeland Canal #2
BO 740 San Joaquin River at Maze Road Bridge	CO 3110 Tulare Lake
BO 7160 San Joaquin River at Hetch Hetchy Aqueduct Crossing	CO 3130 Elk Bayou near Tulare
BO 7070 San Joaquin River at West Stanislaus I.D. Intake	CO 3169 Tule River below Porterville
BO 7080 San Joaquin River at Grayson	CO 3182 Porter Slough at Porterville
BO 7200 San Joaquin River at Patterson Bridge	CO 3187 Porter Slough near Porterville
BO 7250 San Joaquin River at Crows Landing	CO 3913 Friant-Kern Canal Delivery to Potter Slough
BO 7300 San Joaquin River near Newman	CO 3923 Friant-Kern Canal Delivery to Tule River
BO 7375 San Joaquin River near Fremont Ford Bridge	CO 3925 Hubbs-Miner Ditch at Porterville
BO 7400 San Joaquin River near Stevenson	CO 3940 Rhodes-Fine Ditch near Porterville
BO 7575 San Joaquin River above Sand Slough	CO 3948 Woods-Central Ditch near Porterville
BO 7610 San Joaquin River near Dos Palos	CO 3960 Poplar Ditch near Porterville
BO 7710 San Joaquin River near Mendota	CO 3965 Vandalia Ditch near Porterville
BO 7885 San Joaquin River below Friant	CO 3970 Campbell Moreland Ditch above Porterville
BO 8720 Orestimba Creek near Crows Landing	CO 3984 Porter Slough Ditch at Porterville
BS 1250 Maxwell Creek near Coulterville	CO 5150 Kern River near Bakersfield
	CO 2100 North Fork Tule River at Springville

* Not shown on Plate as station is outside of district boundary.



STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN JOAQUIN DISTRICT
HYDROLOGIC DATA 1964
LOCATION OF SURFACE WATER
MEASUREMENT STATIONS
SCALE OF MILES
0 5 10 15 20



LEGEND



DISTRICT OR AREA BOUNDARIES.

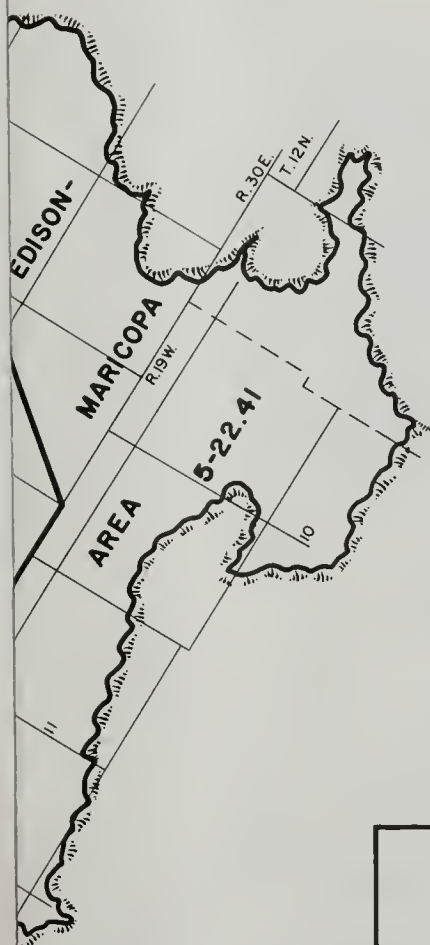
NUMBERS INDICATE CODE CLASSIFICATION.



DISTRICTS OR AREAS WITH A GROUND WATER
LEVEL CHANGE OF +5.0 FEET OR MORE IN
THE UNCONFINED AND SEMICONFINED AQUIFERS
FROM SPRING 1963 TO SPRING 1964.

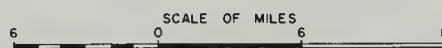


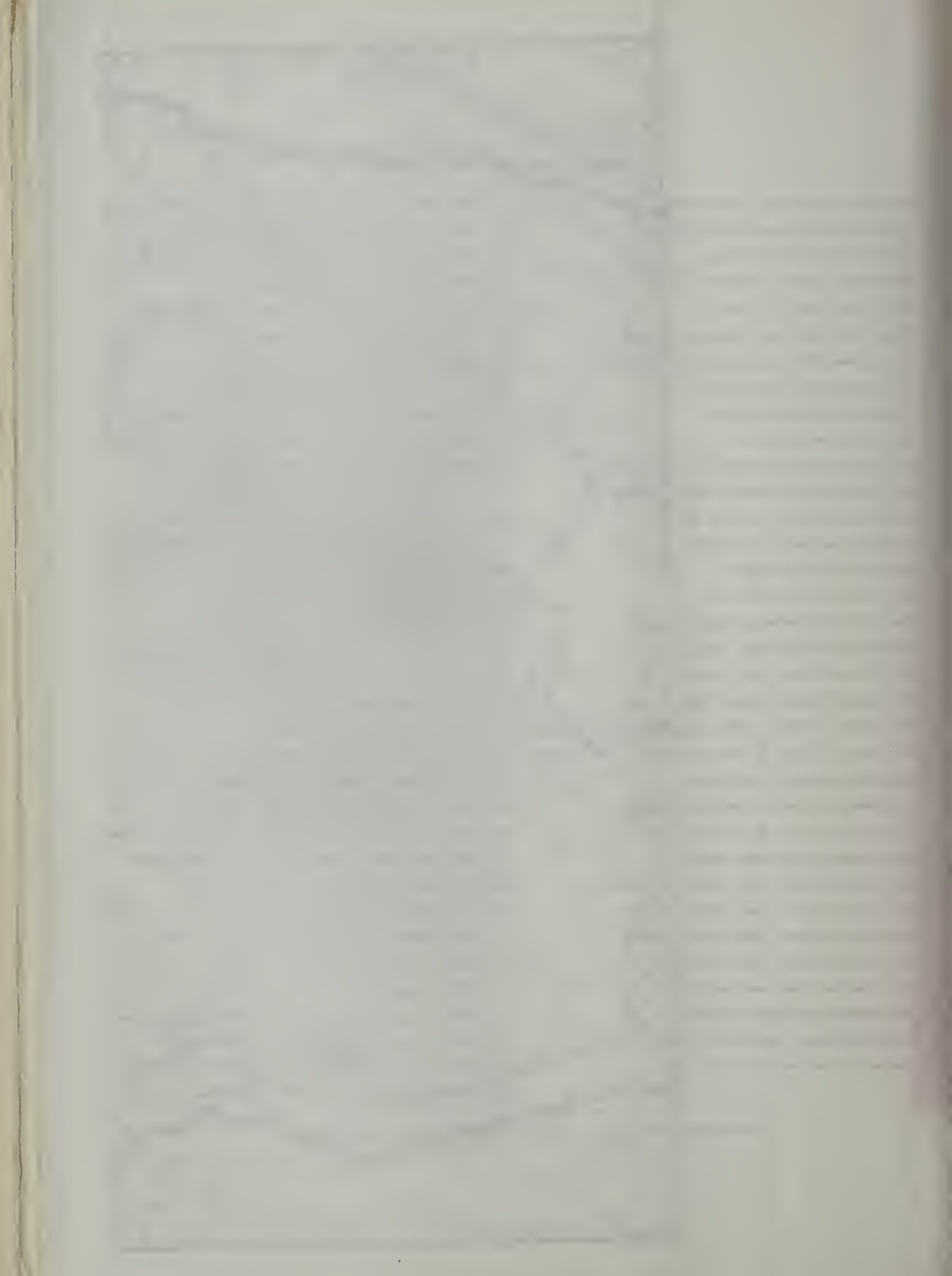
DISTRICTS OR AREAS WITH A GROUND WATER
LEVEL CHANGE OF -5.0 FEET OR MORE IN
THE UNCONFINED AND SEMICONFINED AQUIFERS
FROM SPRING 1963 TO SPRING 1964.



STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN JOAQUIN DISTRICT
HYDROLOGIC DATA 1964

GROUND WATER LEVEL CHANGES
IN DISTRICTS OR AREAS
UNCONFINED AND SEMICONFINED AQUIFERS
SPRING 1963 — SPRING 1964







LEGEND



DISTRICT OR AREA BOUNDARIES.

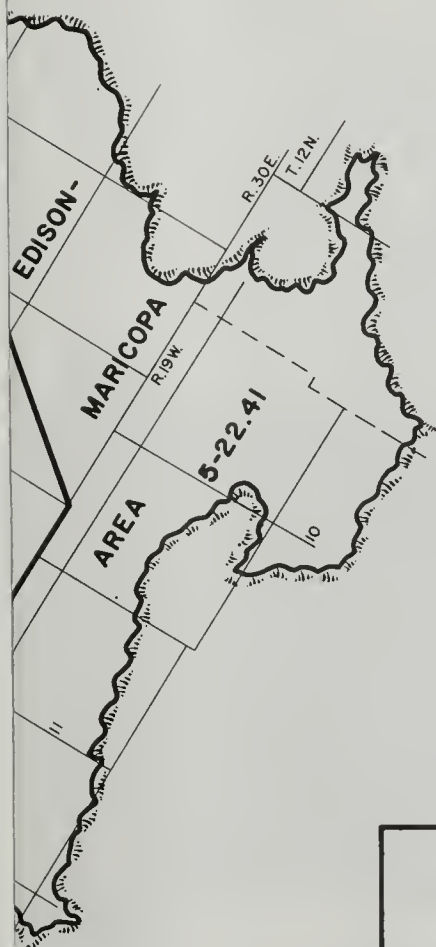
NUMBERS INDICATE CODE CLASSIFICATION.



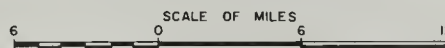
DISTRICTS OR AREAS WITH A GROUND WATER LEVEL CHANGE OF +5.0 FEET OR MORE IN THE CONFINED AND SEMICONFINED AQUIFERS FROM SPRING 1963 TO SPRING 1964.

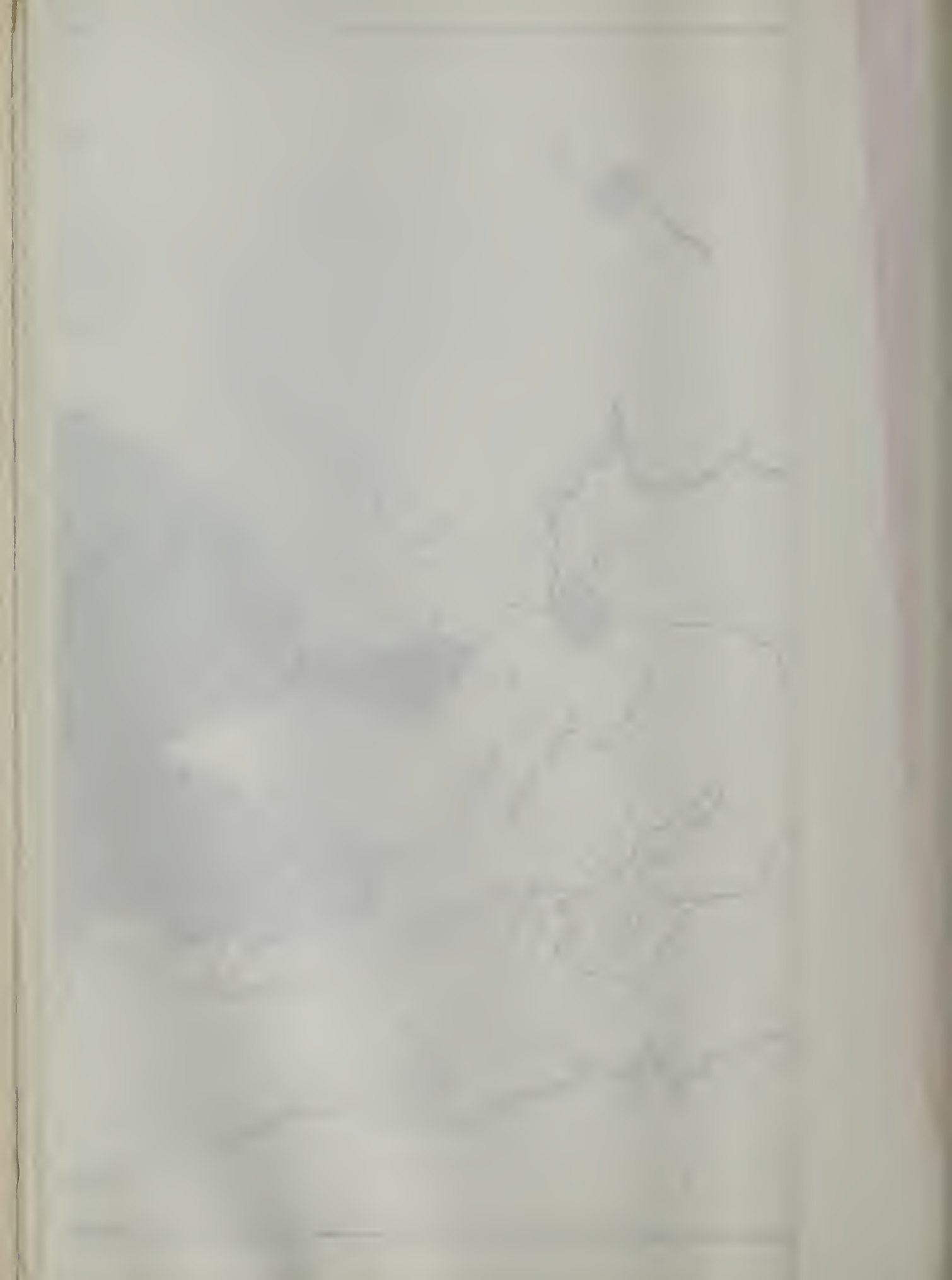


DISTRICTS OR AREAS WITH A GROUND WATER LEVEL CHANGE OF -5.0 FEET OR MORE IN THE CONFINED AND SEMICONFINED AQUIFERS FROM SPRING 1963 TO SPRING 1964.



STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN JOAQUIN DISTRICT
HYDROLOGIC DATA 1964
**GROUND WATER LEVEL CHANGES
IN DISTRICTS OR AREAS
CONFINED AND SEMICONFINED AQUIFERS
SPRING 1963 — SPRING 1964**







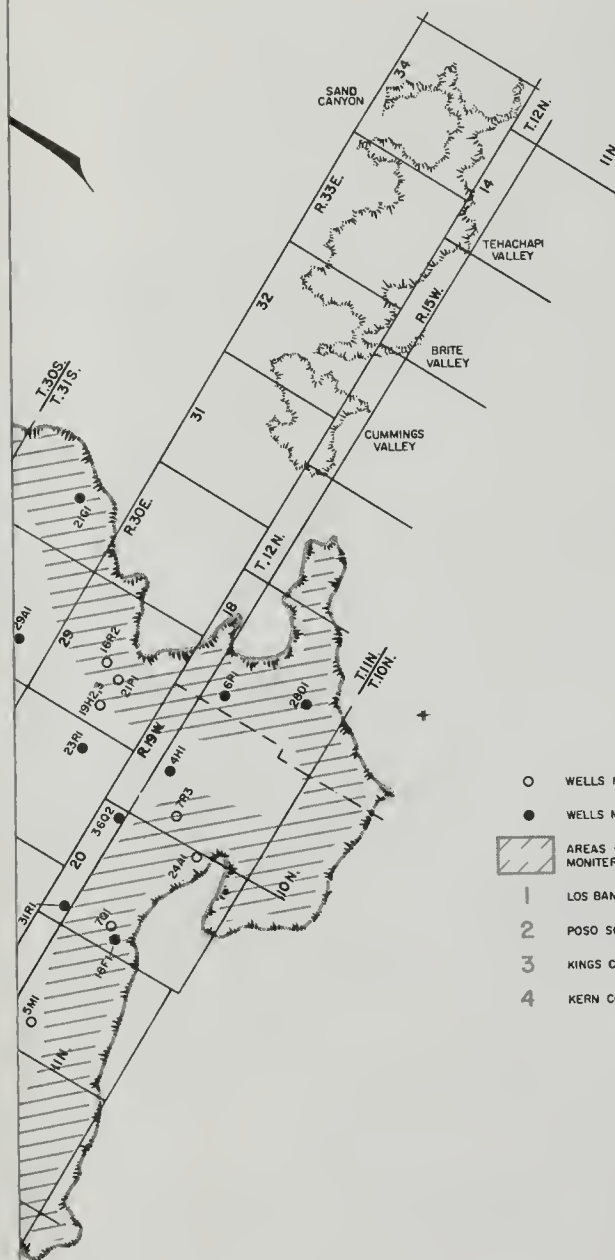
LEGEND

- DISTRICT OR AREA BOUNDARIES
- NUMBERS INDICATE CODE CLASSIFICATION
- DISTRICTS OR AREAS WITH A GROUND WATER LEVEL CHANGE OF +5.0 FEET OR MORE IN THE CONFINED AND SEMICONFINED AQUIFERS FROM SPRING 1963 TO SPRING 1964
- DISTRICTS OR AREAS WITH A GROUND WATER LEVEL CHANGE OF -5.0 FEET OR MORE IN THE CONFINED AND SEMICONFINED AQUIFERS FROM SPRING 1963 TO SPRING 1964


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DEPARTMENT OF WATER RESOURCES
SAN JOAQUIN DISTRICT
HYDROLOGIC DATA 1964

GROUND WATER LEVEL CHANGES
IN DISTRICTS OR AREAS
CONFINED AND SEMICONFINED AQUIFERS
SPRING 1963 - SPRING 1964

SCALE OF MILES

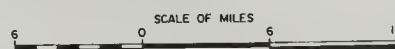


LEGEND

- WELLS MEASURED MONTHLY
- WELLS MEASURED ANNUALLY OR SEMI-ANNUALLY
-  AREAS OF COOPERATIVE GROUND WATER LEVEL MONITORING PROGRAMS
- 1 LOS BANOS SOIL CONSERVATION DISTRICT
- 2 POSO SOIL CONSERVATION DISTRICT
- 3 KINGS COUNTY WATER DISTRICT
- 4 KERN COUNTY

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LOCATION OF SELECTED OBSERVATION WELLS AND COOPERATIVE PROGRAM AREAS



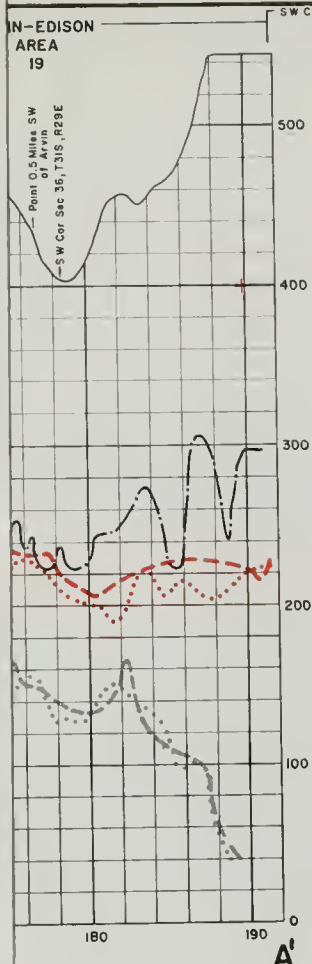


- LEGEND
- WELLS MEASURED MONTHLY
 - WELLS MEASURED ANNUALLY OR SEMI-ANNUALLY
 - AREAS OF COOPERATIVE DRILLING WATER LEVEL MEASUREMENT PROGRAMS
 - LOS BANOS IRRIGATION DISTRICT
 - MERCED-SUTTER IRRIGATION DISTRICT
 - 1 COOPERATIVE PROGRAM AREA
 - 2 COOPERATIVE PROGRAM AREA
 - 3 COOPERATIVE PROGRAM AREA
 - 4 COOPERATIVE PROGRAM AREA

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 DEPARTMENT OF WATER RESOURCES
 SAN JOAQUIN DISTRICT
 HYDROLOGIC DATA 1964

LOCATION OF
 SELECTED OBSERVATION WELLS
 AND
 COOPERATIVE PROGRAM AREAS

SCALE OF MILES



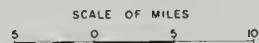
- HISTORIC
GROUND WATER AREAS**
- 1 MADERA
 - 2 FRESNO
 - 3 CONSOLIDATED
 - 4 FRESNO(2) CONSOLIDATED(3)
AND OUTSIDE AREA (4a, 4b, & 4c)
 - 5 CENTERVILLE BOTTOMS
 - 6 ALTA
 - 7 IVANHOE
 - 8 OUTSIDE IVANHOE
 - 9 MILL CREEK
 - 10 TULARE
 - 11 ELK BAYOU
 - 12 LINDSAY-EXETER
 - 13 TULE RIVER
 - 14 LOWER DEER CREEK
 - 15 MIDDLE DEER CREEK
 - 16 DELANO - EARLIMART
 - 17 Mc FARLAND - SHAFTER
 - 18 ROSEDALE
 - 19 ARVIN - EDISON

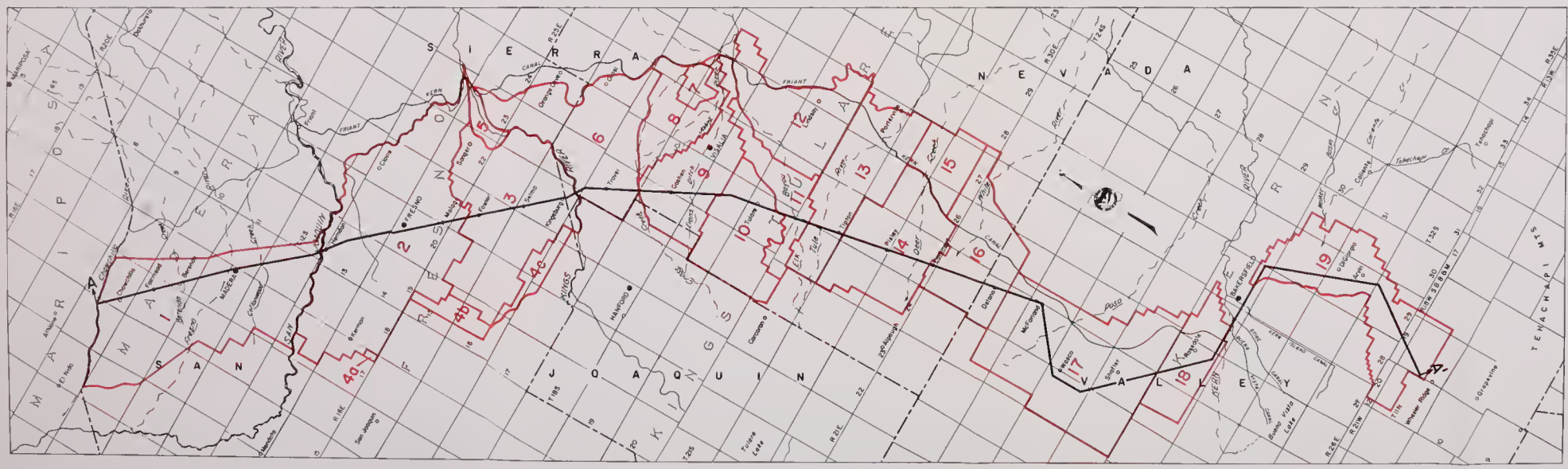
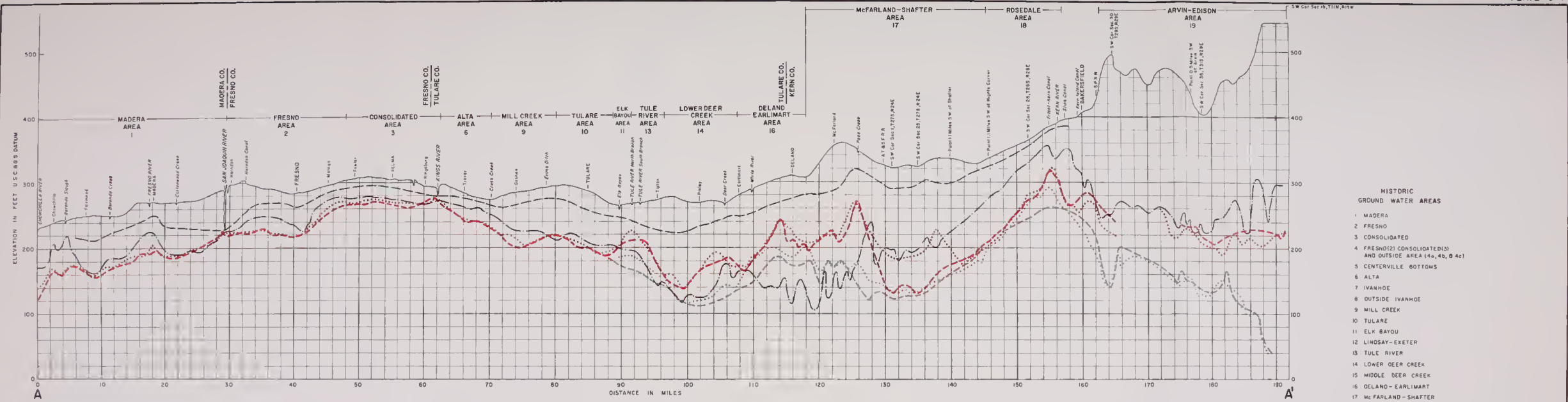


- LEGEND**
- GROUND WATER AREA BOUNDARIES
 - GROUND WATER LEVEL FALL 1921
 - GROUND WATER LEVEL FALL 1951
 - GROUND WATER LEVEL SPRING 1963, UNCONFINED AQUIFER
 - GROUND WATER LEVEL SPRING 1963, PRESSURE SURFACE
 - GROUND WATER LEVEL SPRING 1964, UNCONFINED AQUIFER
 - GROUND WATER LEVEL SPRING 1964, PRESSURE SURFACE
 - GROUND WATER LEVEL PROFILE SECTION

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**MAP OF 19 GROUND WATER AREAS
IN SAN JOAQUIN VALLEY
AND
PROFILES ALONG SECTION A-A' SHOWING
GROUND WATER LEVELS IN 1921, 1951, 1963 & 1964**



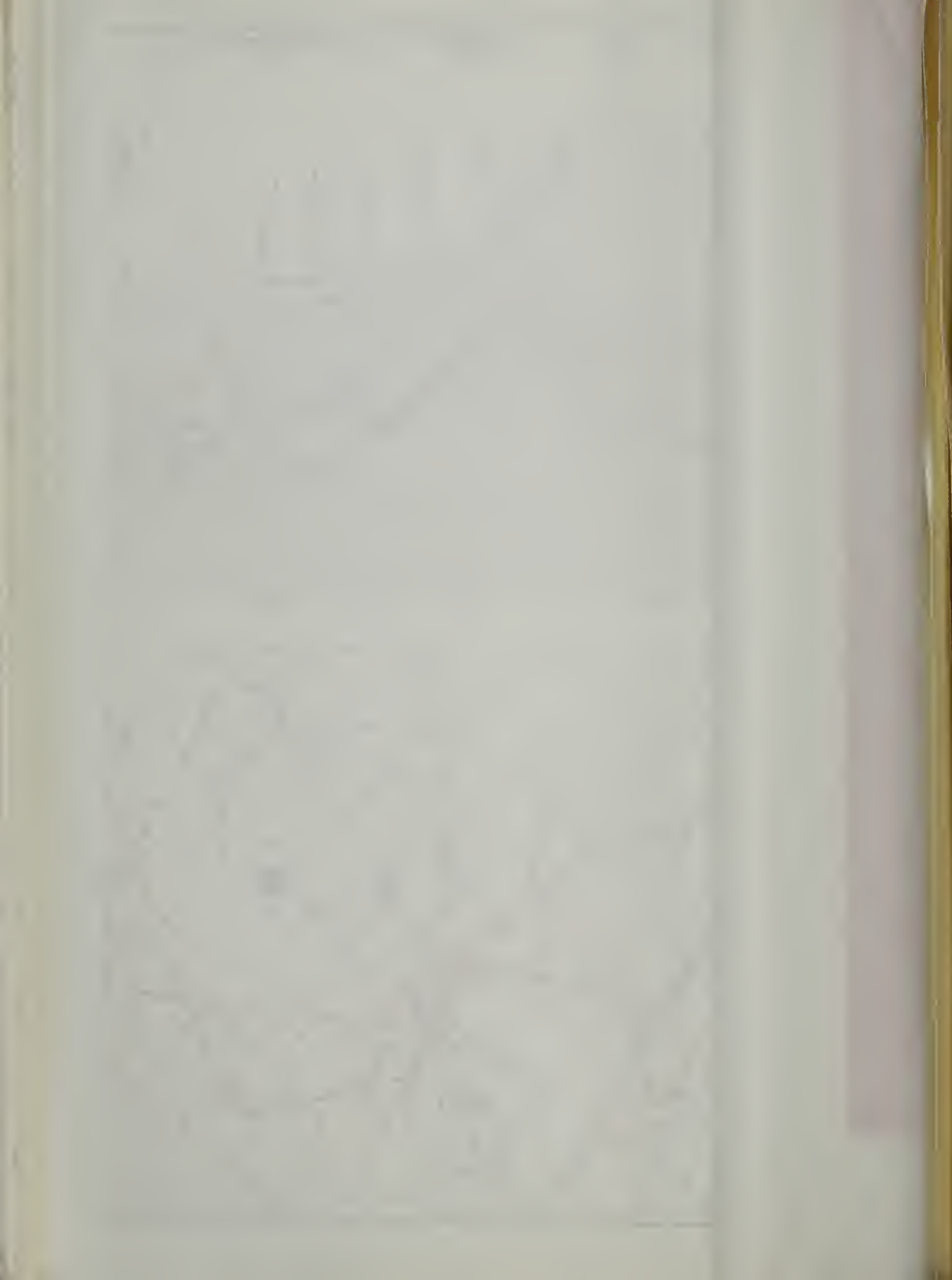


- LEGEND**
- GROUND WATER AREA BOUNDARIES
 - GROUND WATER LEVEL FALL 1921
 - GROUND WATER LEVEL FALL 1951
 - GROUND WATER LEVEL SPRING 1963, UNCONFINED AQUIFER
 - GROUND WATER LEVEL SPRING 1963, PRESSURE SURFACE
 - GROUND WATER LEVEL SPRING 1964, UNCONFINED AQUIFER
 - GROUND WATER LEVEL SPRING 1964, PRESSURE SURFACE
 - GROUND WATER LEVEL PROFILE SECTION

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN JOAQUIN DISTRICT
HYDROLOGIC DATA 1964

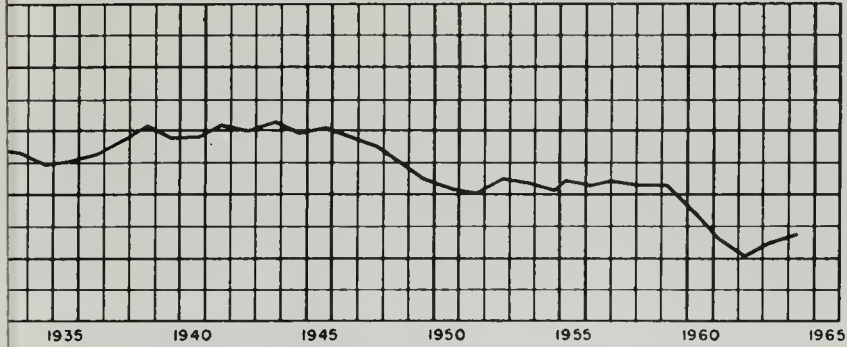
**MAP OF 19 GROUND WATER AREAS
IN SAN JOAQUIN VALLEY
AND
PROFILES ALONG SECTION A-A' SHOWING
GROUND WATER LEVELS IN 1921, 1951, 1963 & 1964**

SCALE OF MILES



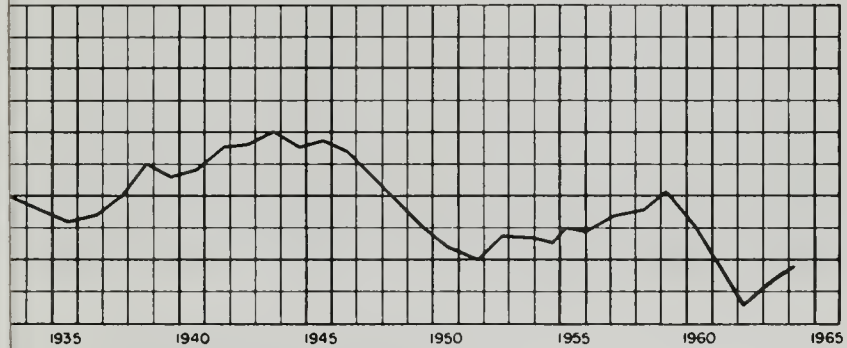
MILL CREEK GROUND WATER AREA

AREA 12825 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 305'



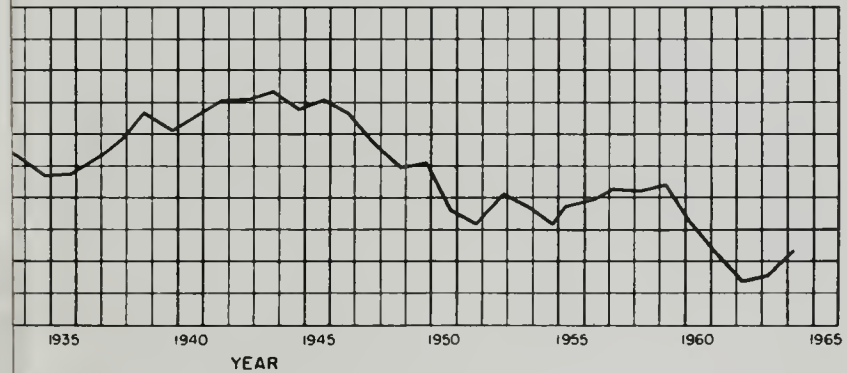
TULARE GROUND WATER AREA

AREA 12107 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 363'



ELK BAYOU GROUND WATER AREA

AREA 67.6 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 295'



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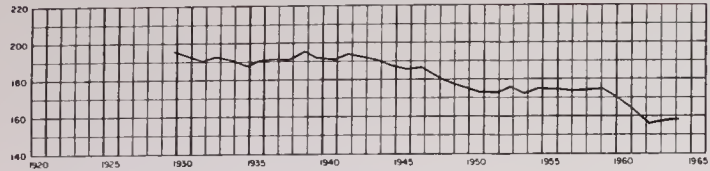
ROUND

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN JOAQUIN DISTRICT
HYDROLOGIC DATA 1964

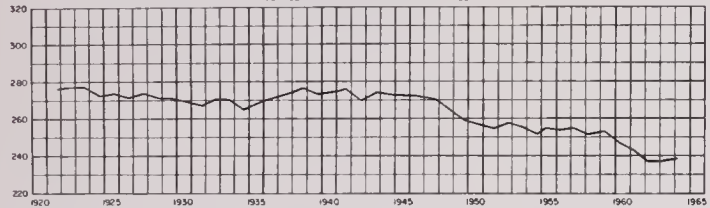
FLUCTUATION OF AVERAGE WATER LEVEL,
1921 TO 1964 IN 19 GROUND WATER AREAS
IN SAN JOAQUIN VALLEY

ELEVATION IN FEET - US C&G S. DATUM

MADERA GROUND WATER AREA
AREA 342.6 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 230'



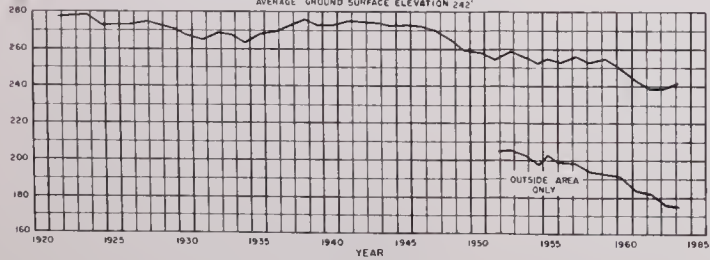
FRESNO GROUND WATER AREA
AREA 404.0 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 291'



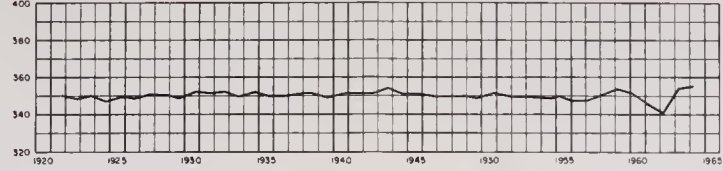
CONSOLIDATED GROUND WATER AREA
AREA 243.0 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 296'



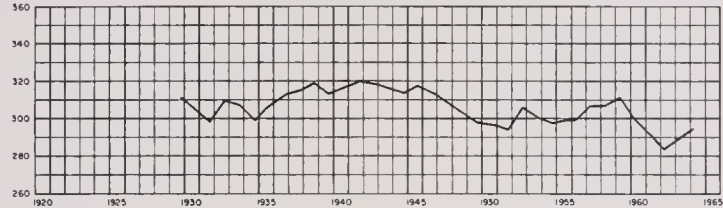
FRESNO-CONSOLIDATED OUTSIDE GROUND WATER AREA
AREA 700.11 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 289'
AREA 53.11 SQUARE MILES (OUTSIDE AREA ONLY)
AVERAGE GROUND SURFACE ELEVATION 242'



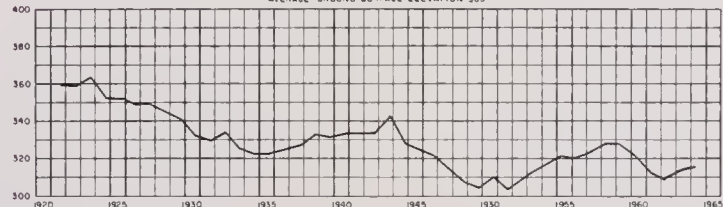
CENTERVILLE BOTTOMS GROUND WATER AREA
AREA 18.12 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 363'



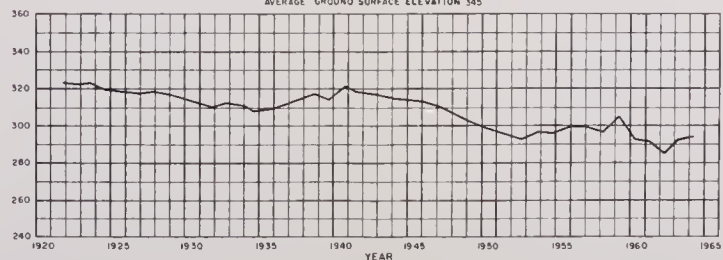
ALTA GROUND WATER AREA
AREA 190.93 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 331'



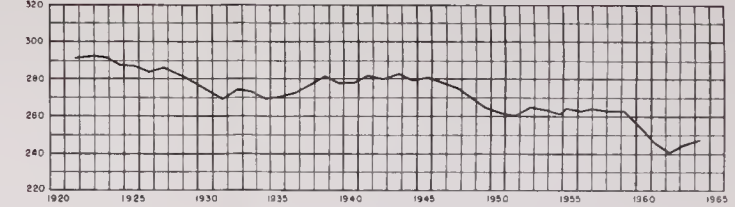
IVANHOE GROUND WATER AREA
AREA 17.37 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 393'



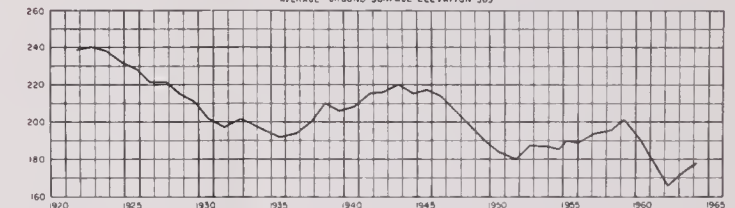
OUTSIDE IVANHOE GROUND WATER AREA
AREA 76.65 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 345'



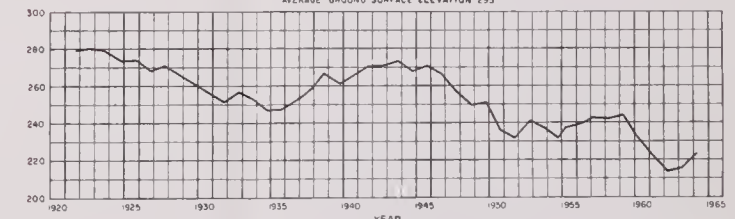
MILL CREEK GROUND WATER AREA
AREA 128.25 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 305'



TULARE GROUND WATER AREA
AREA 121.07 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 363'



ELK BAYOU GROUND WATER AREA
AREA 67.6 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 295'



NOTE SEE PLATE C-4 FOR GROUND
WATER AREA LOCATION

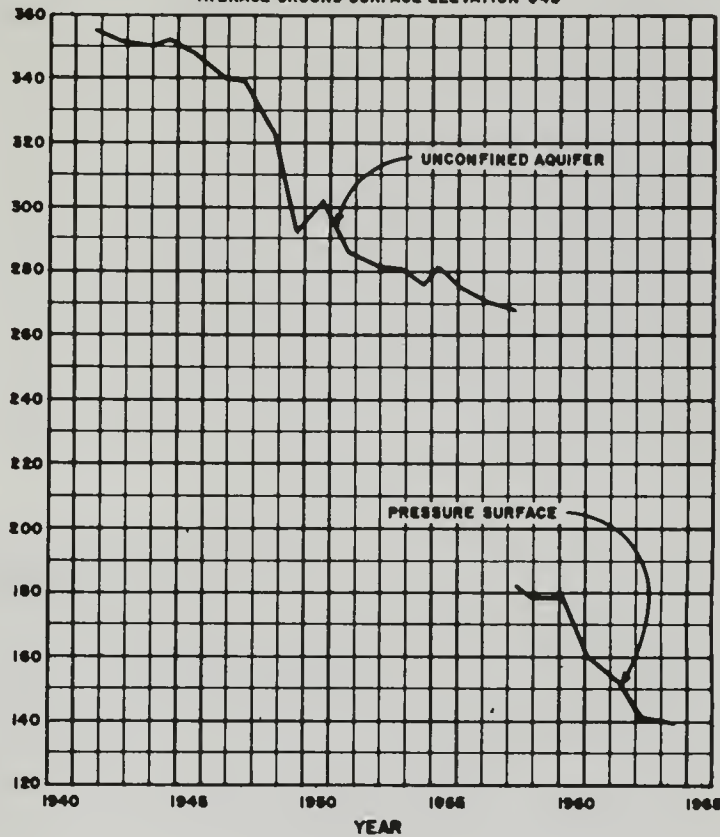
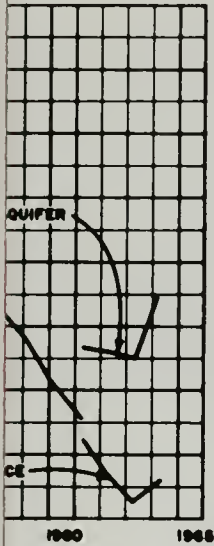
STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN JOAQUIN DISTRICT
HYDROLOGIC DATA 1964

FLUCTUATION OF AVERAGE WATER LEVEL,
1921 TO 1964 IN 19 GROUND WATER AREAS
IN SAN JOAQUIN VALLEY

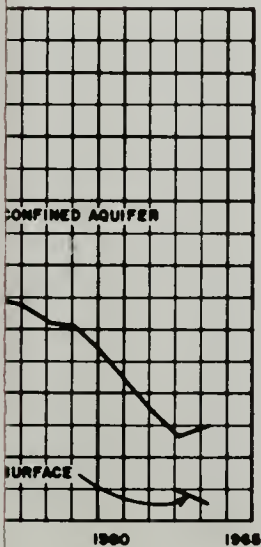
ELEVATION IN FEET - U.S. C&G S. DATUM



ARVIN-EDISON GROUND WATER AREA
 AREA 205.18 SQUARE MILES
 AVERAGE GROUND SURFACE ELEVATION 643'



NOTE: SEE PLATE C-4 FOR GROUND
 WATER AREA LOCATION

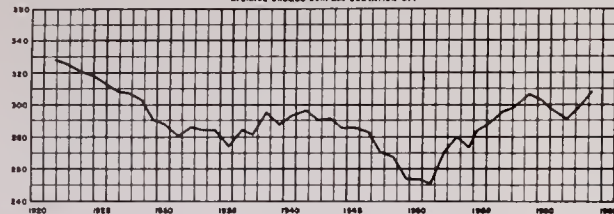


STATE OF CALIFORNIA
 THE RESOURCES AGENCY
 DEPARTMENT OF WATER RESOURCES
 SAN JOAQUIN DISTRICT
 HYDROLOGIC DATA 1964

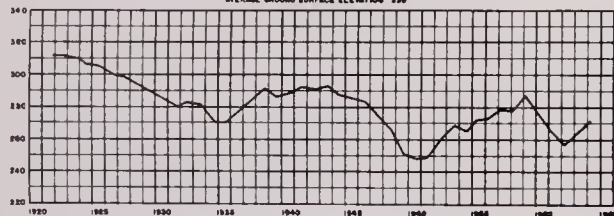
**FLUCTUATION OF AVERAGE WATER LEVEL,
 1921 TO 1964 IN 19 GROUND WATER AREAS
 IN SAN JOAQUIN VALLEY**



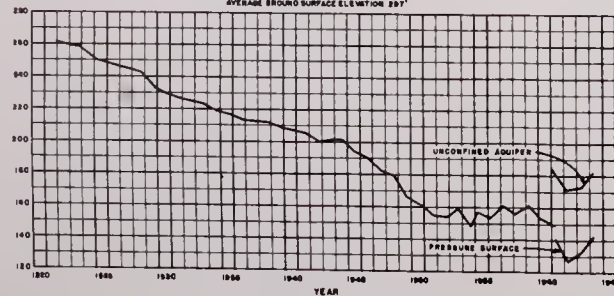
LINDSAY-EXETER GROUND WATER AREA
AREA 130.43 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 317'



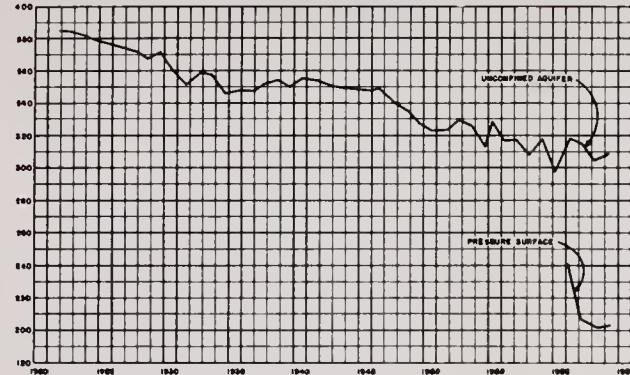
TULE RIVER GROUND WATER AREA
AREA 106.9 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 336'



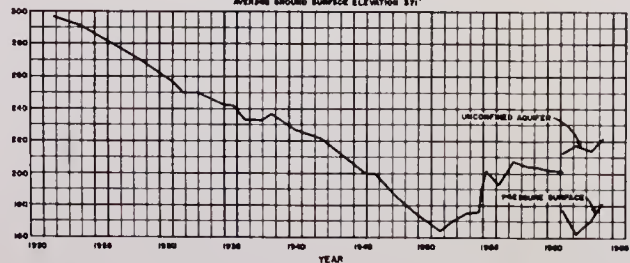
LOWER DEER CREEK GROUND WATER AREA
AREA 102.22 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 327'



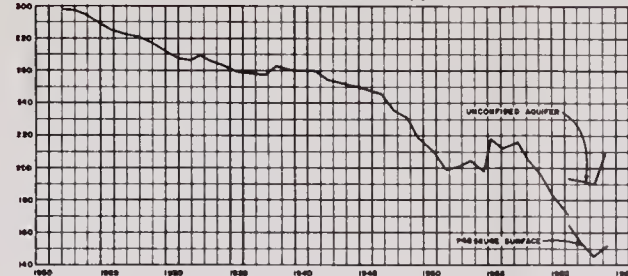
MIDDLE DEER CREEK GROUND WATER AREA
AREA 74.29 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 340'



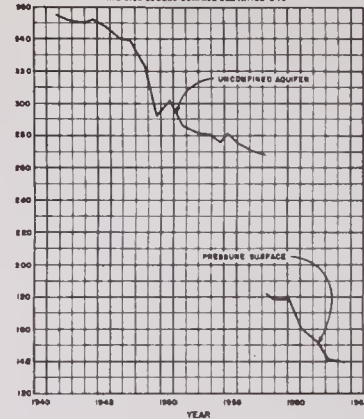
DELANO-EARLMARTY GROUND WATER AREA
AREA 140.0 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 371'



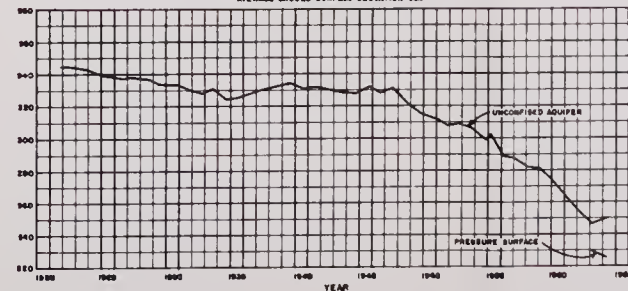
Mc FARLAND-SHAFTER GROUND WATER AREA
AREA 306.0 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 340'



ARVIN-EDISON GROUND WATER AREA
AREA 209.18 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 343'



ROSEDALE GROUND WATER AREA
AREA 79.80 SQUARE MILES
AVERAGE GROUND SURFACE ELEVATION 363'



NOTE: SEE PLATE C-4 FOR GROUND WATER AREA LOCATION

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SAN JOAQUIN DISTRICT
HYDROLOGIC DATA 1964

FLUCTUATION OF AVERAGE WATER LEVEL,
1921 TO 1964 IN 19 GROUND WATER AREAS
IN SAN JOAQUIN VALLEY



FIGURE 1. PERCENTAGE OF CASES OF INFLUENZA IN THE UNITED STATES, 1918-1919



1918-1919

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LEGEND

----- CONNECTS MEASUREMENTS MADE AT INTERVALS
OF ONE YEAR OR MORE
----- GROUND LEVEL

STATE OF CALIFORNIA
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SAN JOAQUIN DISTRICT
HYDROLOGIC DATA 1964

FLUCTUATION OF WATER LEVEL
IN SELECTED WELLS IN SAN JOAQUIN VALLEY

Table 1
Summary of data for the first set of experiments. The table lists various parameters and their corresponding values, organized into columns and rows.

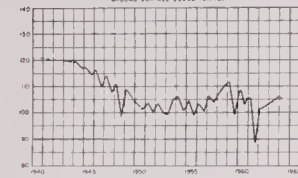
Table 2
Summary of data for the second set of experiments. This table follows a similar format to Table 1, detailing experimental parameters and results.

Table 3
Summary of data for the third set of experiments. The table provides a detailed overview of the experimental conditions and outcomes.

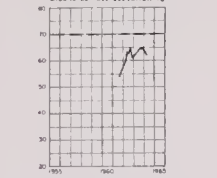
Table 4
Summary of data for the fourth set of experiments. This table concludes the series of experimental data presented on the page.

ELEVATION IN FEET ABOVE DATUM

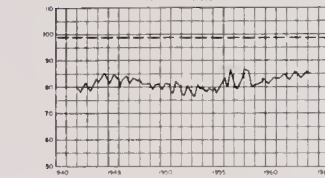
OAKDALE IRRIGATION DISTRICT (S-2206)
WELL 28/10E-33W, M.D.B.M.
GROUND SURFACE ELEVATION 187



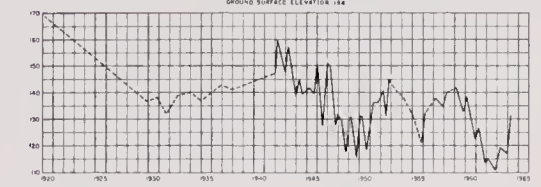
TURLOCK IRRIGATION DISTRICT (S-2208)
WELL 55/5E-41W, M.D.B.M.
GROUND SURFACE ELEVATION 107



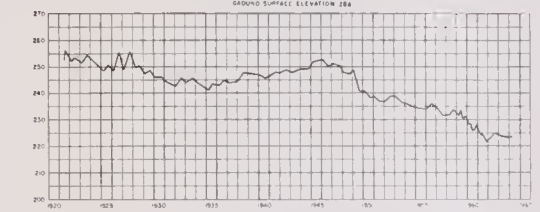
DELTA-MENDOTA AREA-SHALLOW ZONE (S-2211)
WELL 35/5E-18N, M.D.B.M.
GROUND SURFACE ELEVATION 95



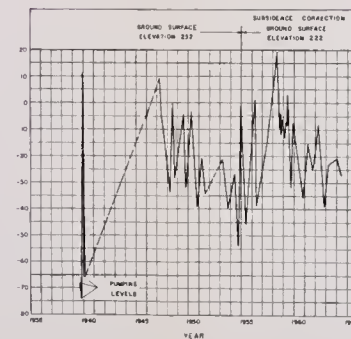
CHOWCHILLA WATER DISTRICT (S-2212)
WELL 10S/15E-23W, M.D.B.M.
GROUND SURFACE ELEVATION 188



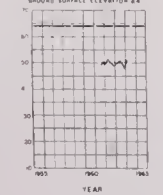
FRESNO IRRIGATION DISTRICT (S-2215)
WELL 13S/19E-90W, M.D.B.M.
GROUND SURFACE ELEVATION 288



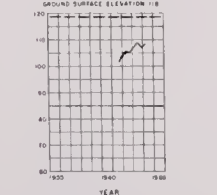
DELTA-MENDOTA AREA-DEEP ZONE (S-2211)
WELL 15S/15E-15W, M.D.B.M.
GROUND SURFACE ELEVATION 222



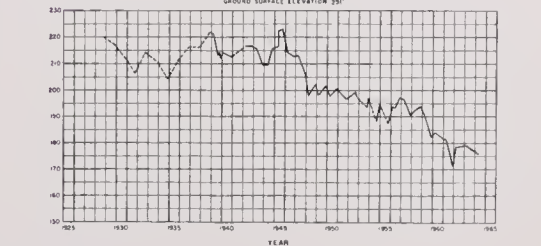
MODESTO IRRIGATION DISTRICT (S-2207)
WELL 35/5E-22E, M.D.B.M.
GROUND SURFACE ELEVATION 88



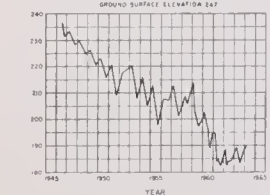
MERCED IRRIGATION DISTRICT (S-2209)
WELL 75/11E-11W, M.D.B.M.
GROUND SURFACE ELEVATION 118



MAJORA IRRIGATION DISTRICT (S-2213)
WELL 15/17E-27W, M.D.B.M.
GROUND SURFACE ELEVATION 251



CONSOLIDATED IRRIGATION DISTRICT (S-2219)
WELL 16S/20E-22W, M.D.B.M.
GROUND SURFACE ELEVATION 247



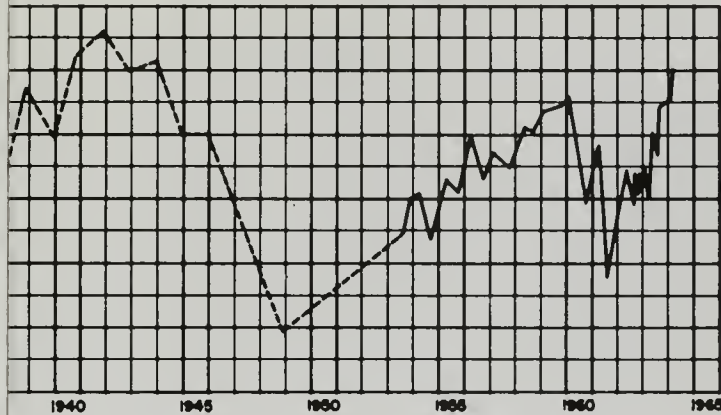
LEGEND
 --- CONNECTS MEASUREMENTS MADE AT INTERVAL OF ONE YEAR OR MORE
 --- GROUND LEVEL

ELEVATION IN FEET ABOVE DATUM



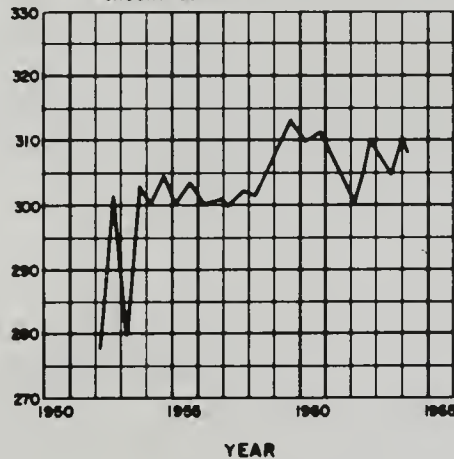
EXETER IRRIGATION DISTRICT (5-22.26)

WELL 18S/27E-2901, M.D.B. & M.
GROUND SURFACE ELEVATION 446'



LINDSAY-STRATHMORE IRRIGATION DISTRICT (5-22.27)

WELL 20S/27E-681, M.D.B. & M.
GROUND SURFACE ELEVATION 372'



LEGEND

- CONNECTS MEASUREMENTS MADE AT INTERVALS OF ONE YEAR OR MORE
- GROUND LEVEL

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HYDROLOGIC DATA 1964

**FLUCTUATION OF WATER LEVEL
IN SELECTED WELLS IN SAN JOAQUIN VALLEY**

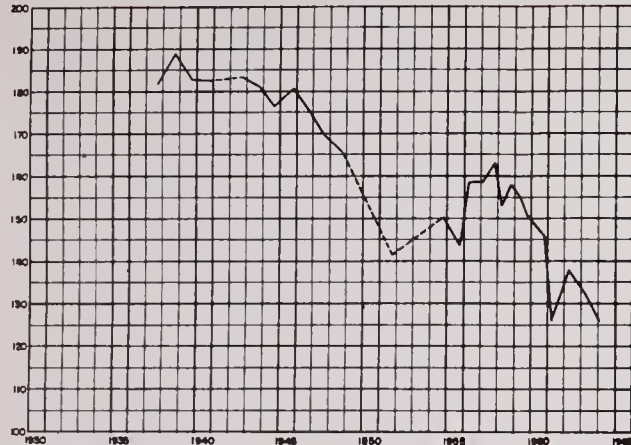
ELEVATION IN FEET - U.S.C. & G.S. DATUM



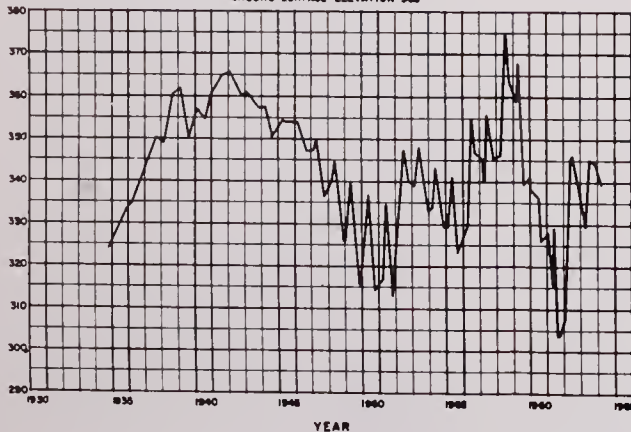
ELEVATION IN FEET - U.S.C. & G.S. DATUM

ELEVATION IN FEET - U.S.C. & G.S. DATUM

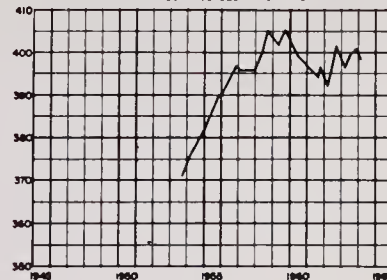
FRESNO SLOUGH AREA (5-22.17)
WELL 175/18E-23A2, M.D.B. & M.
GROUND SURFACE ELEVATION 500'



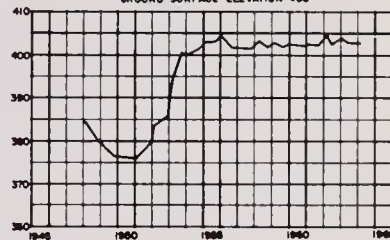
ALTA IRRIGATION DISTRICT (5-22.19)
WELL 155/24E-22D, M.D.B. & M.
GROUND SURFACE ELEVATION 366'



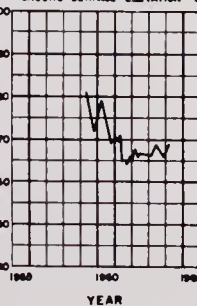
ORANGE COVE IRRIGATION DISTRICT (5-22.21)
WELL 165/25E - 4C2, M.D. & B.M.
GROUND SURFACE ELEVATION 418'



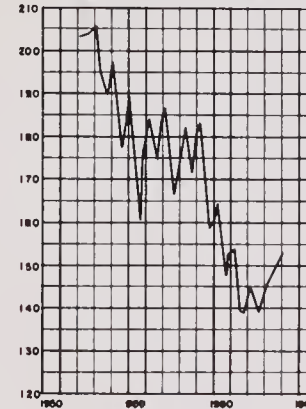
STONE CORRAL IRRIGATION DISTRICT (5-22.22)
WELL 165/26E - 32R, M.D.B. & M.
GROUND SURFACE ELEVATION 406'



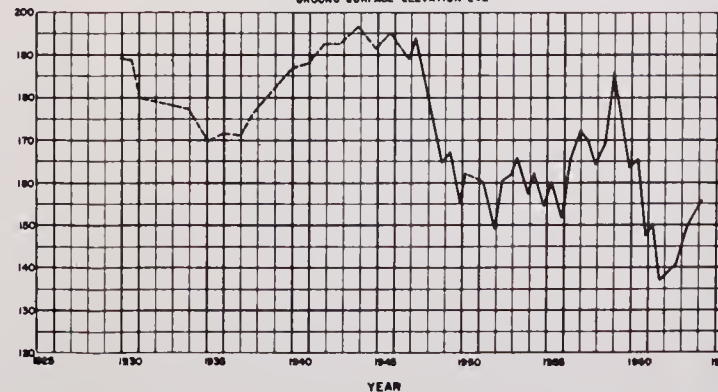
IVANHOE IRRIGATION DISTRICT (5-22.23)
WELL 175/26E - 35M1, M.D. & B.M.
GROUND SURFACE ELEVATION 340'



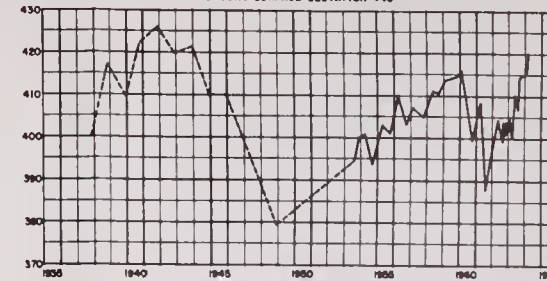
KAWEAH DELTA WATER CONSERVATION DISTRICT (5-22.24)
WELL 195/22E-19A2, M.D. & B.M.
GROUND SURFACE ELEVATION 235'



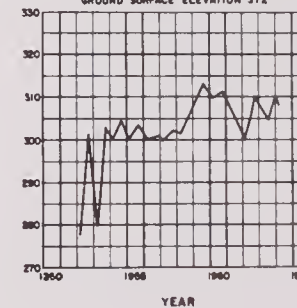
TULARE IRRIGATION DISTRICT (5-22.25)
WELL 205/23E-9J1, M.D. & B.M.
GROUND SURFACE ELEVATION 248'



EXETER IRRIGATION DISTRICT (5-22.26)
WELL 185/27E-2901, M.D.B. & M.
GROUND SURFACE ELEVATION 446'



LINDSAY - STRATHMORE IRRIGATION DISTRICT (5-22.27)
WELL 205/27E-681, M.D.B. & M.
GROUND SURFACE ELEVATION 372'



LEGEND

- CONNECTS MEASUREMENTS MADE AT INTERVALS OF ONE YEAR OR MORE
- GROUND LEVEL

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DEPARTMENT OF WATER RESOURCES
SAN JOAQUIN DISTRICT
HYDROLOGIC DATA 1964

**FLUCTUATION OF WATER LEVEL
IN SELECTED WELLS IN SAN JOAQUIN VALLEY**

PLATE 119

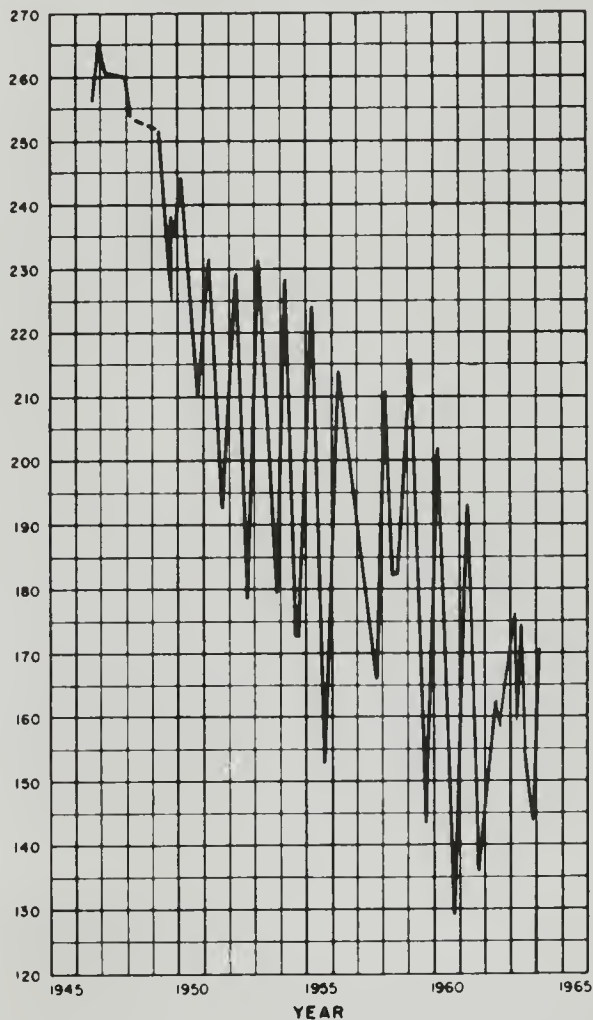
Fig. 1. Plan of the site of the excavations.



Fig. 2. Section of the site of the excavations.



NORTH KERN WATER STORAGE DISTRICT (5-22.37)
WELL 27S/25E-22A1, M.D.B.&M.
GROUND SURFACE ELEVATION 392'



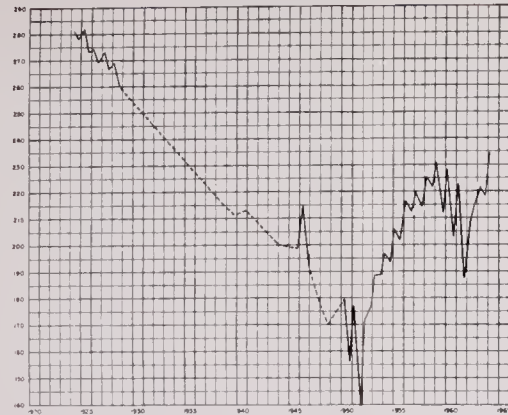
ELEVATION IN FEET - U. S. C. & G. S. DATUM

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN JOAQUIN DISTRICT
HYDROLOGIC DATA 1964

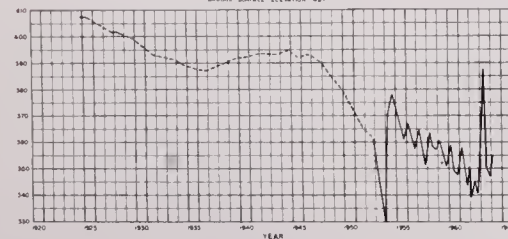
FLUCTUATION OF WATER LEVEL
IN SELECTED WELLS IN SAN JOAQUIN VALLEY

ELEVATION IN FEET - U.S.C.G.S. DATUM

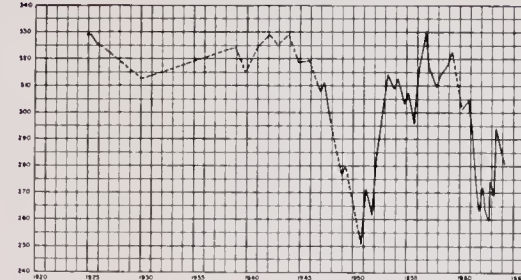
LINDMORE IRRIGATION DISTRICT (5-22 28)
WELL 209/28E-22C2, M.O.B.M.
GROUND SURFACE ELEVATION 182



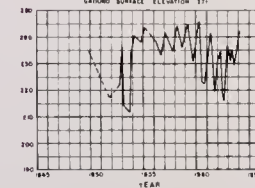
PORTERVILLE IRRIGATION DISTRICT (5-22 29)
WELL 225/27E-10N, M.O.B.M.
GROUND SURFACE ELEVATION 487



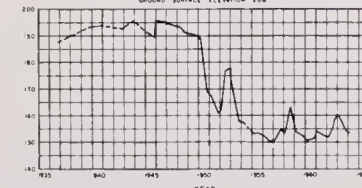
LOWER TULE RIVER IRRIGATION DISTRICT (5-22 30)
WELL 215/28E-10N, M.O.B.M.
GROUND SURFACE ELEVATION 339



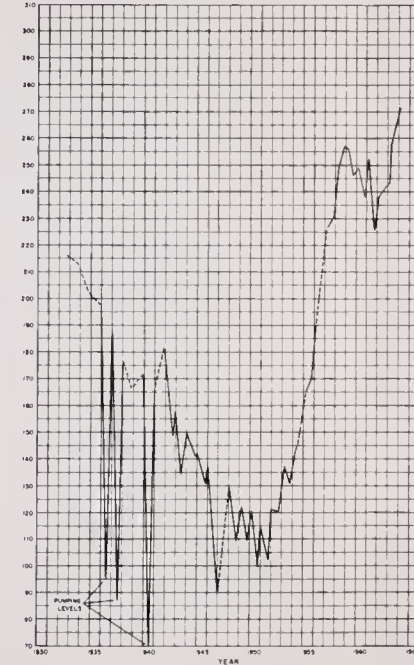
SAUCILITO IRRIGATION DISTRICT (5-22 32)
WELL 225/26E-15J, M.O.B.M.
GROUND SURFACE ELEVATION 371



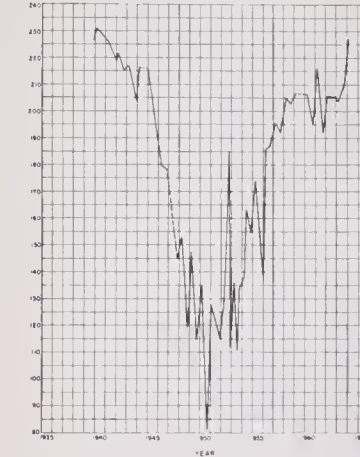
ALPAUGH-ALLENWORTH AREA (5-22 34)
WELL 245/23E-21B2, M.O.B.M.
GROUND SURFACE ELEVATION 208



DELAND-EARLMART IRRIGATION DISTRICT (5-22 35)
WELL 245/26E-12D1, M.O.B.M.
GROUND SURFACE ELEVATION 329



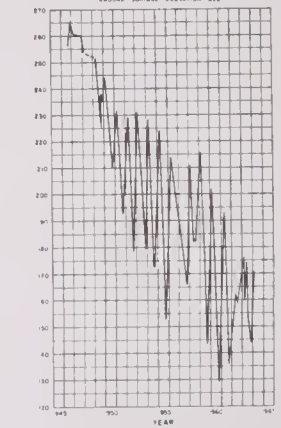
SOUTHERN SAN JOAQUIN MUNICIPAL UTILITY DISTRICT (5-22 36)
WELL 255/28E-28H2, M.O.B.M.
GROUND SURFACE ELEVATION 214



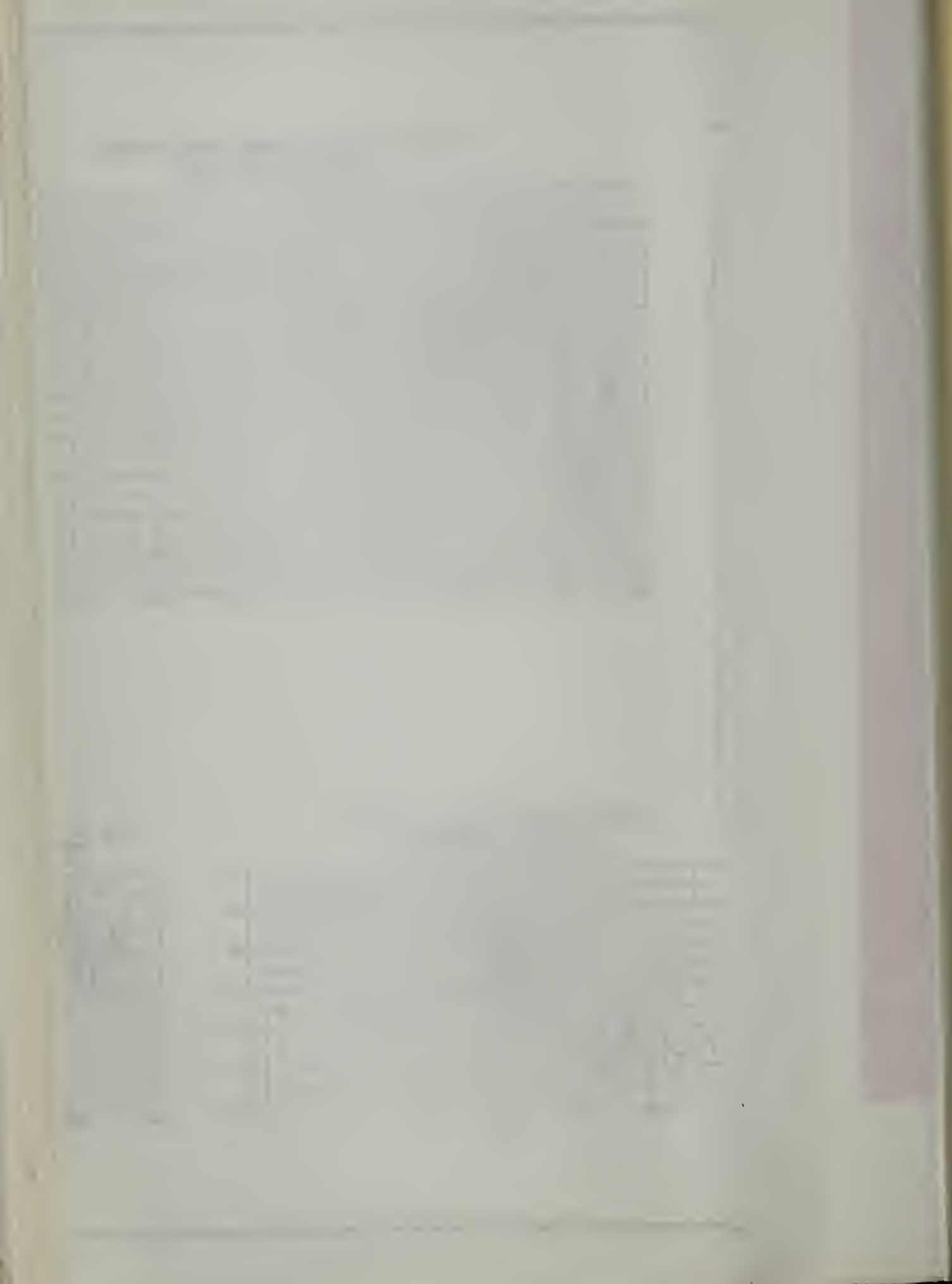
LEGEND

- CONNECTS MEASUREMENTS MADE AT INTERVALS OF ONE YEAR OR MORE
- GROUND LEVEL

NORTH KERN WATER STORAGE DISTRICT (5-22 37)
WELL 275/25E-22A1, M.O.B.M.
GROUND SURFACE ELEVATION 392

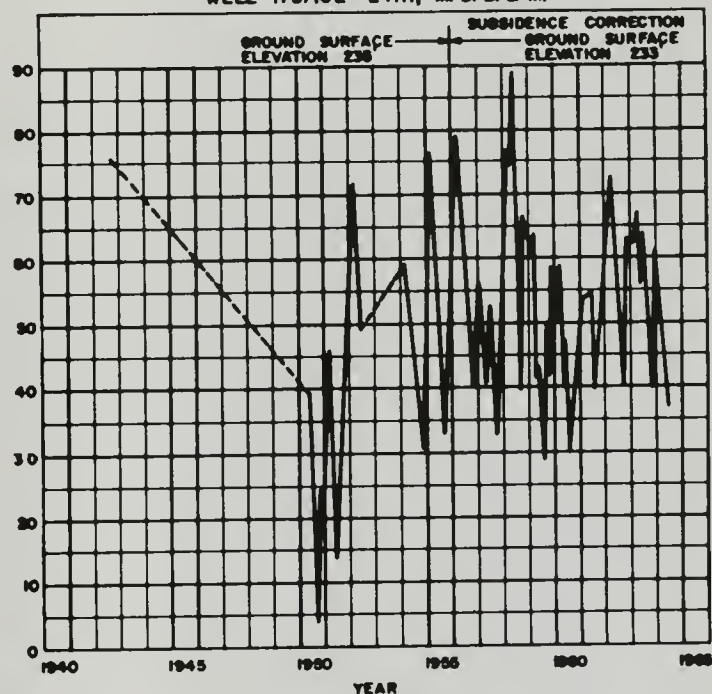


ELEVATION IN FEET - U.S.C.G.S. DATUM



ELEVATION IN FEET - U. S. C. & G. S. DATUM

MENDOTA-HURON AREA (5-22.47)
WELL 17S/16E - 24R1, M. D. B. & M.



LEGEND

- CONNECTS MEASUREMENTS MADE AT INTERVALS OF ONE YEAR OR MORE
- GROUND LEVEL

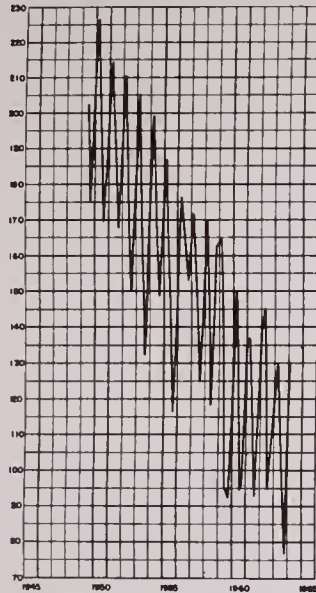
1965

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SAN JOAQUIN DISTRICT
HYDROLOGIC DATA 1964

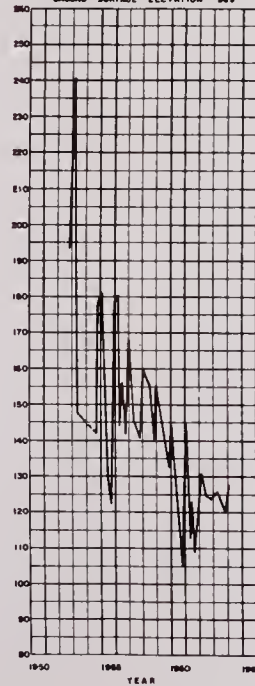
FLUCTUATION OF WATER LEVEL
IN SELECTED WELLS IN SAN JOAQUIN VALLEY

ELEVATION IN FEET - U.S.C.G.S. DATUM

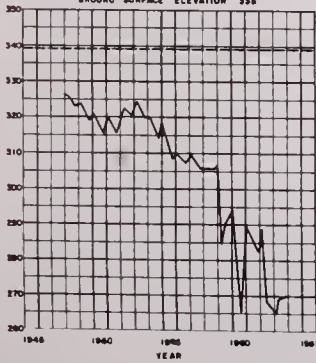
SHAFTER-WASCO IRRIGATION DISTRICT (5-22.38)
WELL 275/24E-35C1, M.D.B.B.M.
GROUND SURFACE ELEVATION 518'



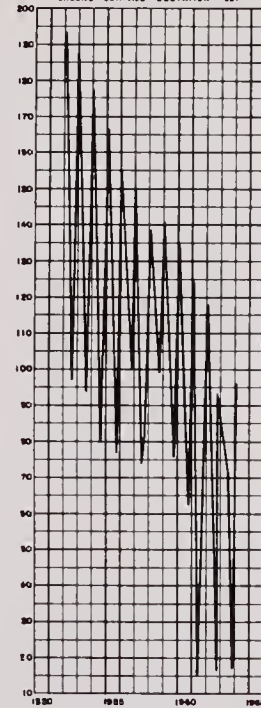
EDISON - MARICOPA AREA (5-22.41)
WELL 12N/20W-31R1, S.B.B.M.
GROUND SURFACE ELEVATION 363'



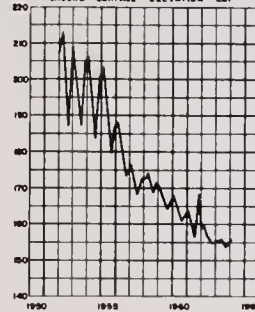
KERN RIVER DELTA AREA (5-22.40)
WELL 30S/26E-27A1, M.D.B.B.M.
GROUND SURFACE ELEVATION 338'



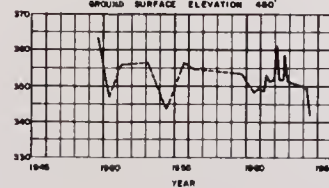
SEMITROPIC WATER STORAGE DISTRICT-DEEP ZONE (5-22.43)
WELL 27S/23E-1R4, M.D.B.B.M.
GROUND SURFACE ELEVATION 587'



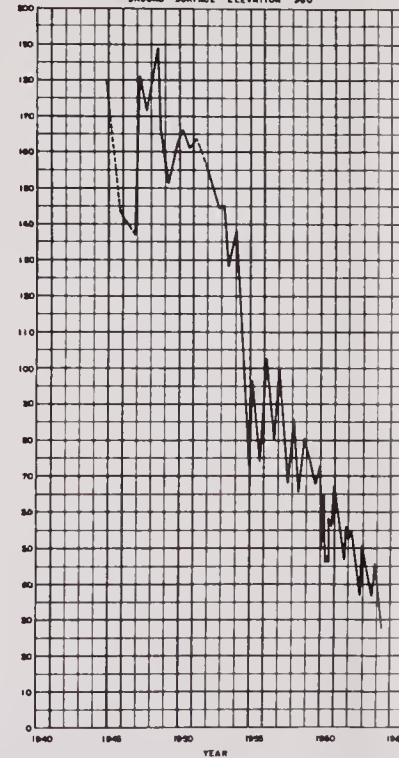
SEMITROPIC WATER STORAGE DISTRICT-SHALLOW ZONE (5-22.43)
WELL 27S/23E-1R1, M.D.B.B.M.
GROUND SURFACE ELEVATION 587'



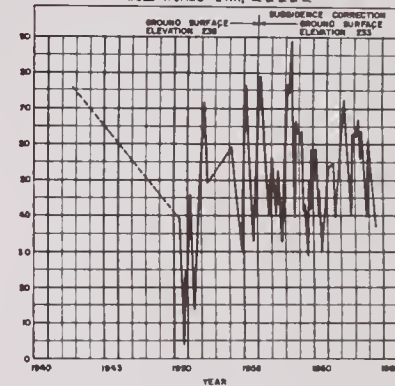
AVENAL-McKITTRICK AREA (5-22.44)
WELL 25S/19E-2002, M.D.B.B.M.
GROUND SURFACE ELEVATION 480'



MENDOTA-HURON AREA (5-22.47)
WELL 21S/18E-2842, M.D.B.B.M.
GROUND SURFACE ELEVATION 560'



MENDOTA-HURON AREA (5-22.47)
WELL 17S/18E-24R1, M.D.B.B.M.



LEGEND

- CONNECTS MEASUREMENTS MADE AT INTERVALS OF ONE YEAR OR MORE
- GROUND LEVEL

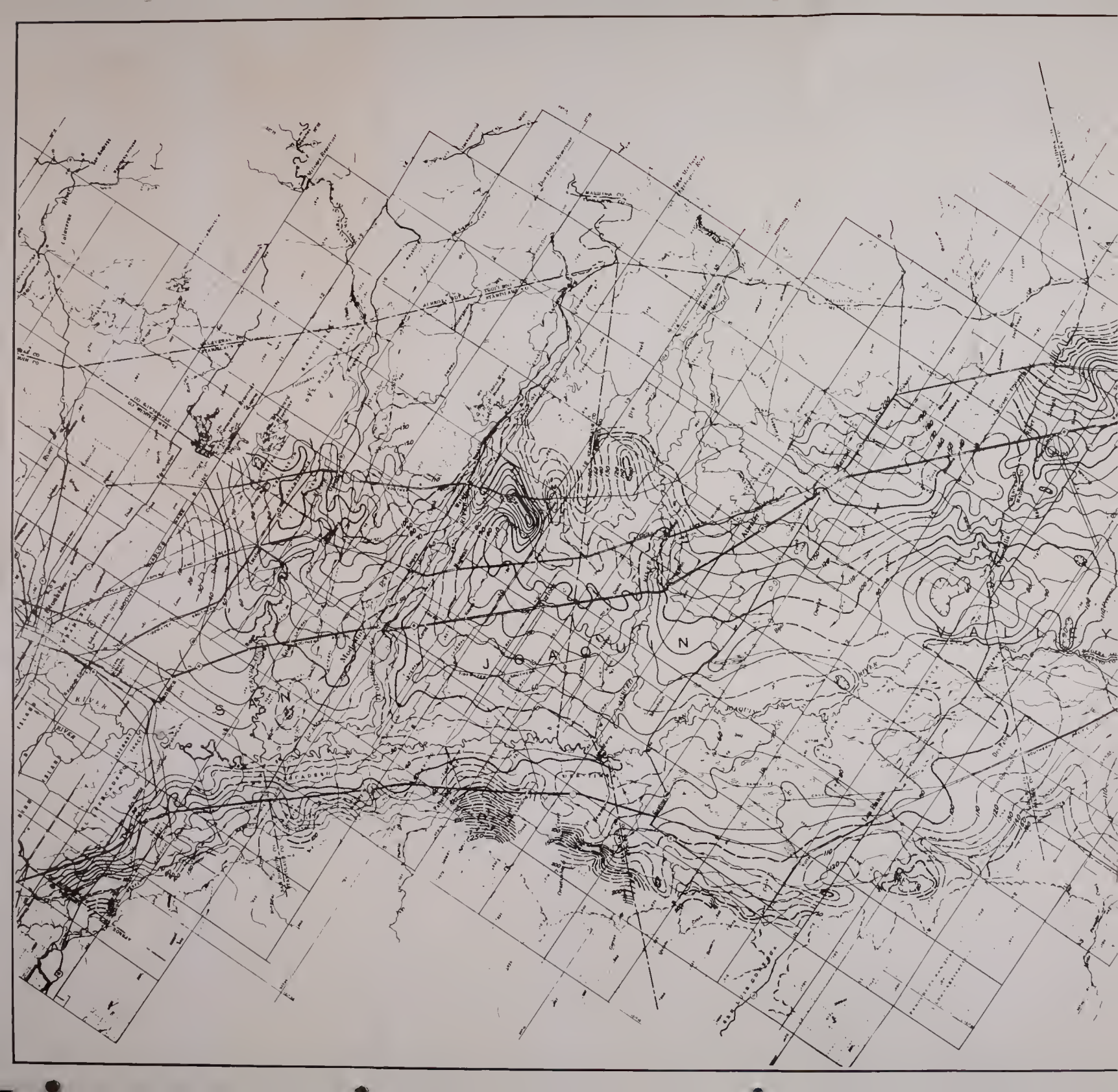
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SAN JOAQUIN DISTRICT
HYDROLOGIC DATA 1964

FLUCTUATION OF WATER LEVEL
IN SELECTED WELLS IN SAN JOAQUIN VALLEY

ELEVATION IN FEET - U.S.C.G.S. DATUM











EXPLANATION

UNCONFINED WATER-TABLE CONTOUR

Lines of equal elevation of water in unconfined and semiconfined aquifers, dashed where inferred; contour interval 10 and 50 feet.

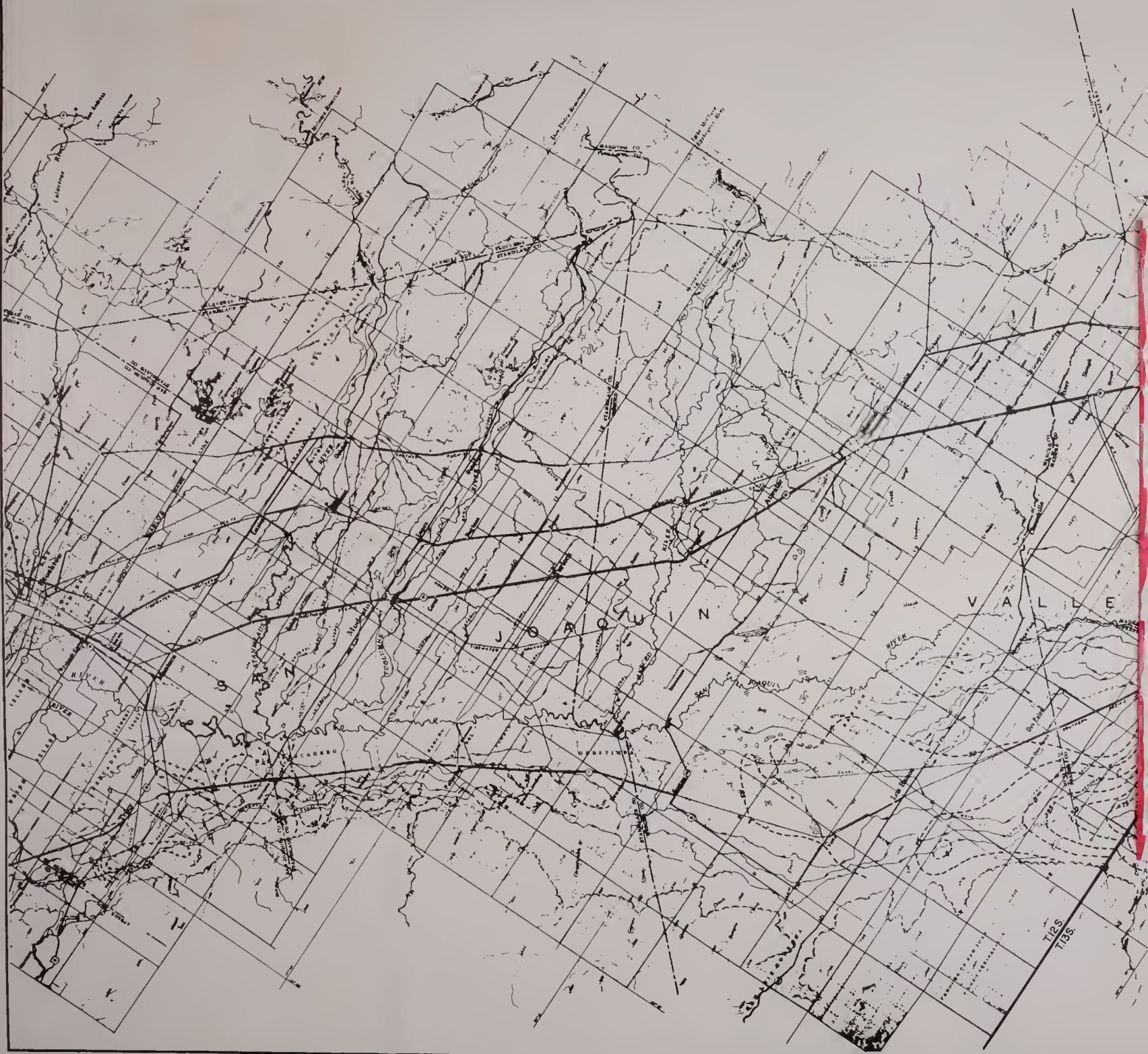
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HYDROLOGIC DATA 1964

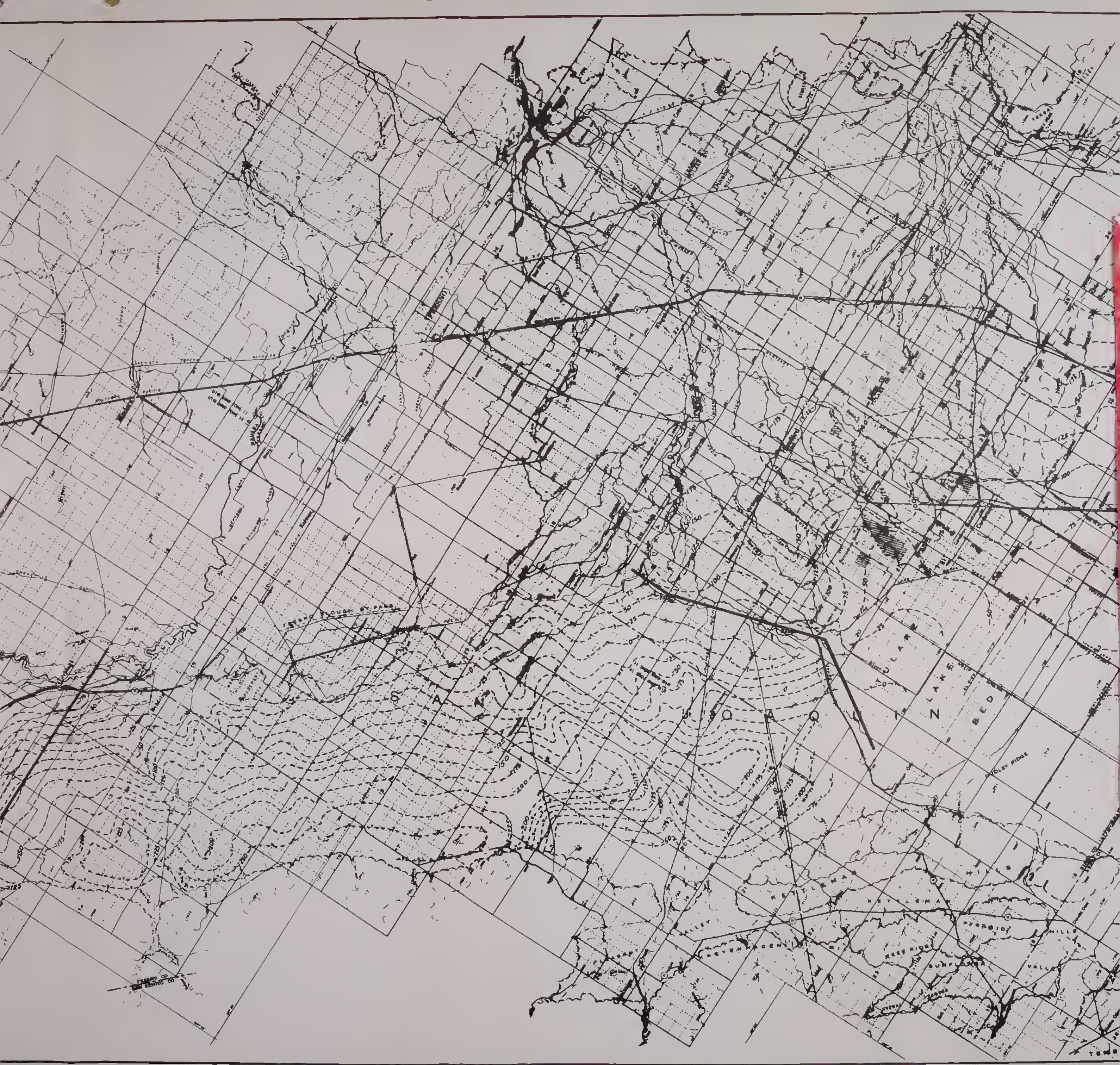
**LINES OF EQUAL ELEVATION
OF WATER IN WELLS**
UNCONFINED AQUIFERS
SAN JOAQUIN VALLEY
SPRING 1964

SCALE OF MILES
0 1 2 3 4 5







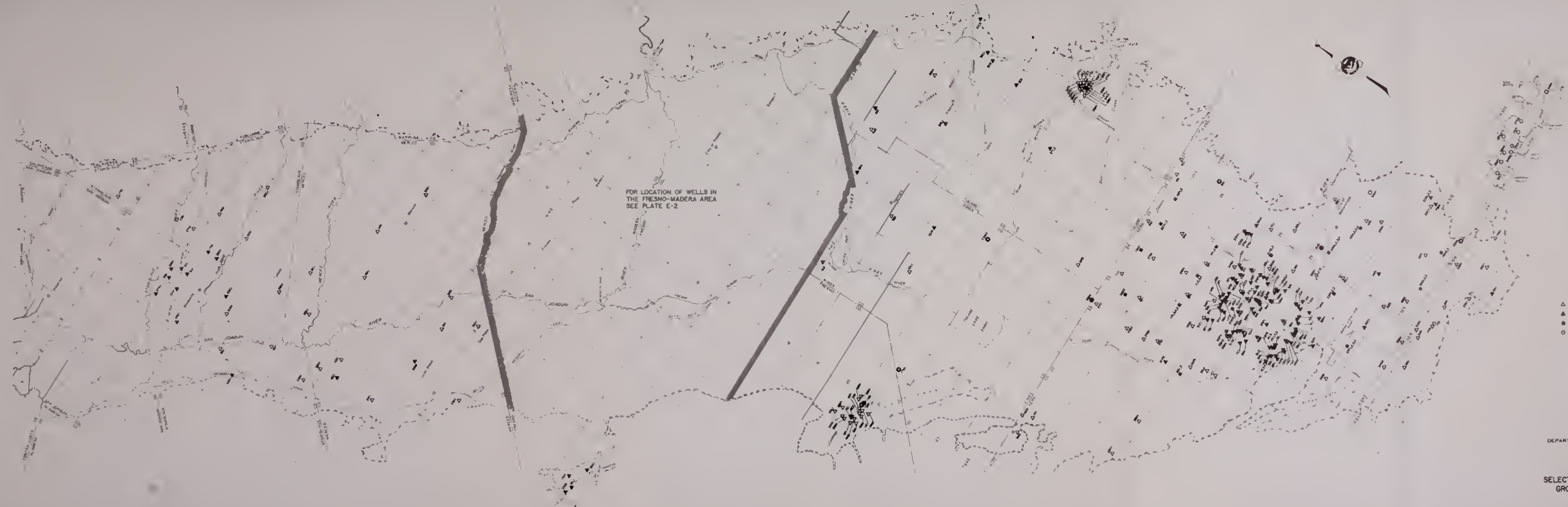




- ☐ PARTIAL CHEMICAL ANALYSIS
- ☐ COMPLETE CHEMICAL ANALYSIS
- ☐ USDR PNEZOMETER (COMPLETE CHEMICAL ANALYSIS)
- ☐ TRACE ELEMENT ANALYSIS

LOCATION OF SELECTED OBSERVATION WELLS GROUND WATER QUALITY





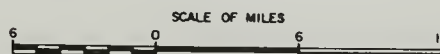


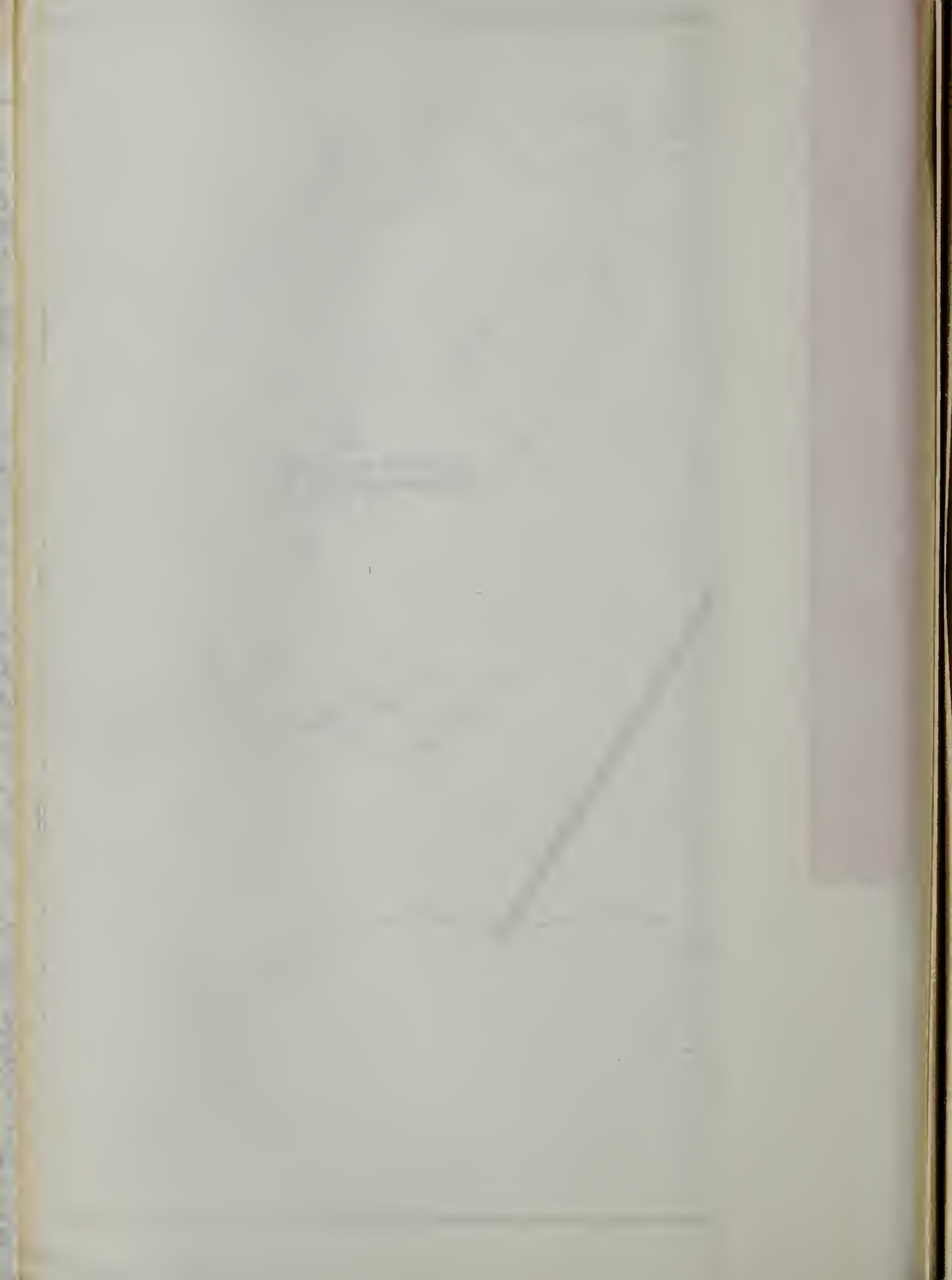
LEGEND

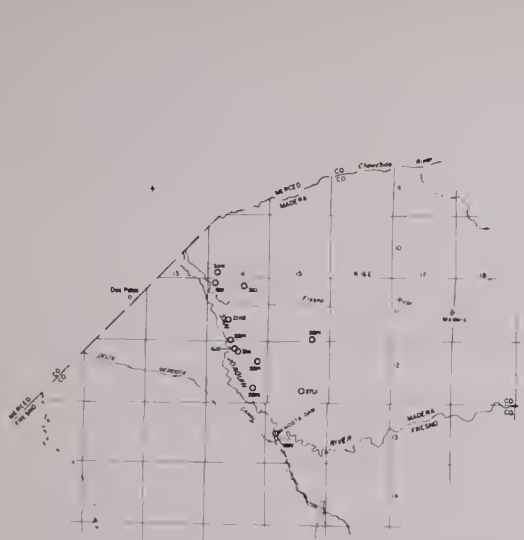
○ WELL LOCATIONS



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HYDROLOGIC DATA 1964
LOCATION OF SELECTED WELLS
FRESNO-MADERA AREA







PERCHED AQUIFER



SEMI-CONFINED AQUIFER



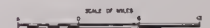
CONFINED AQUIFER

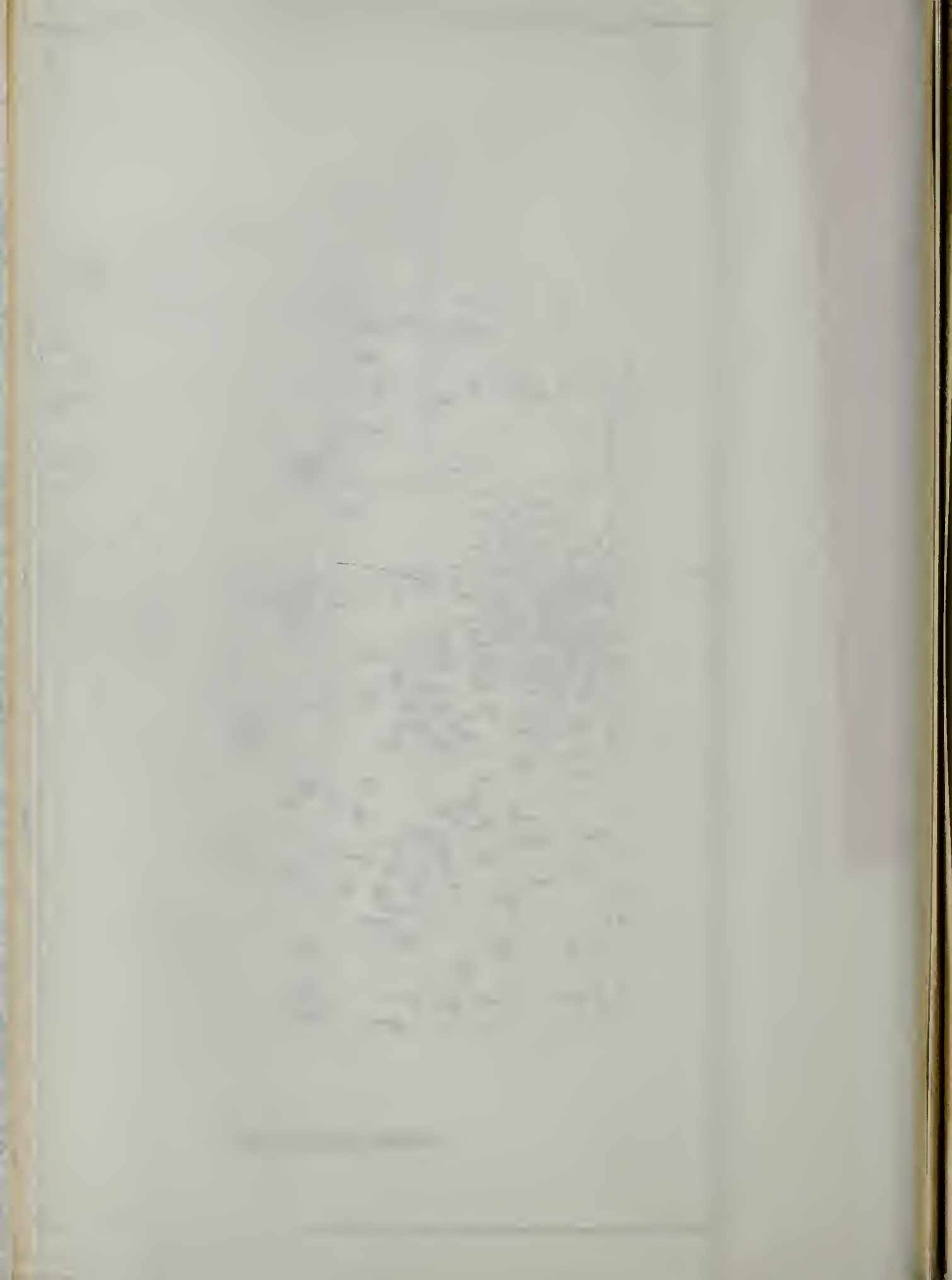
LEGEND
○ WELL LOCATIONS



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HYDROLOGIC DATA 1964

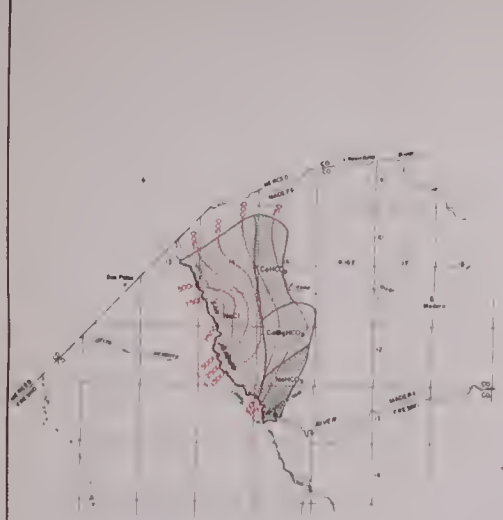
LOCATION OF SELECTED WELLS
FRESNO-MADERA AREA







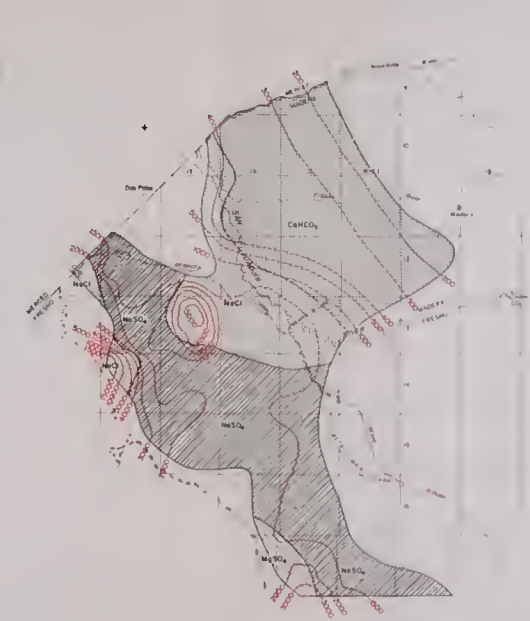
WILSON CANYON



PERCHED AQUIFER



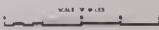
SEMI-CONFINED AQUIFER



CONFINED AQUIFER

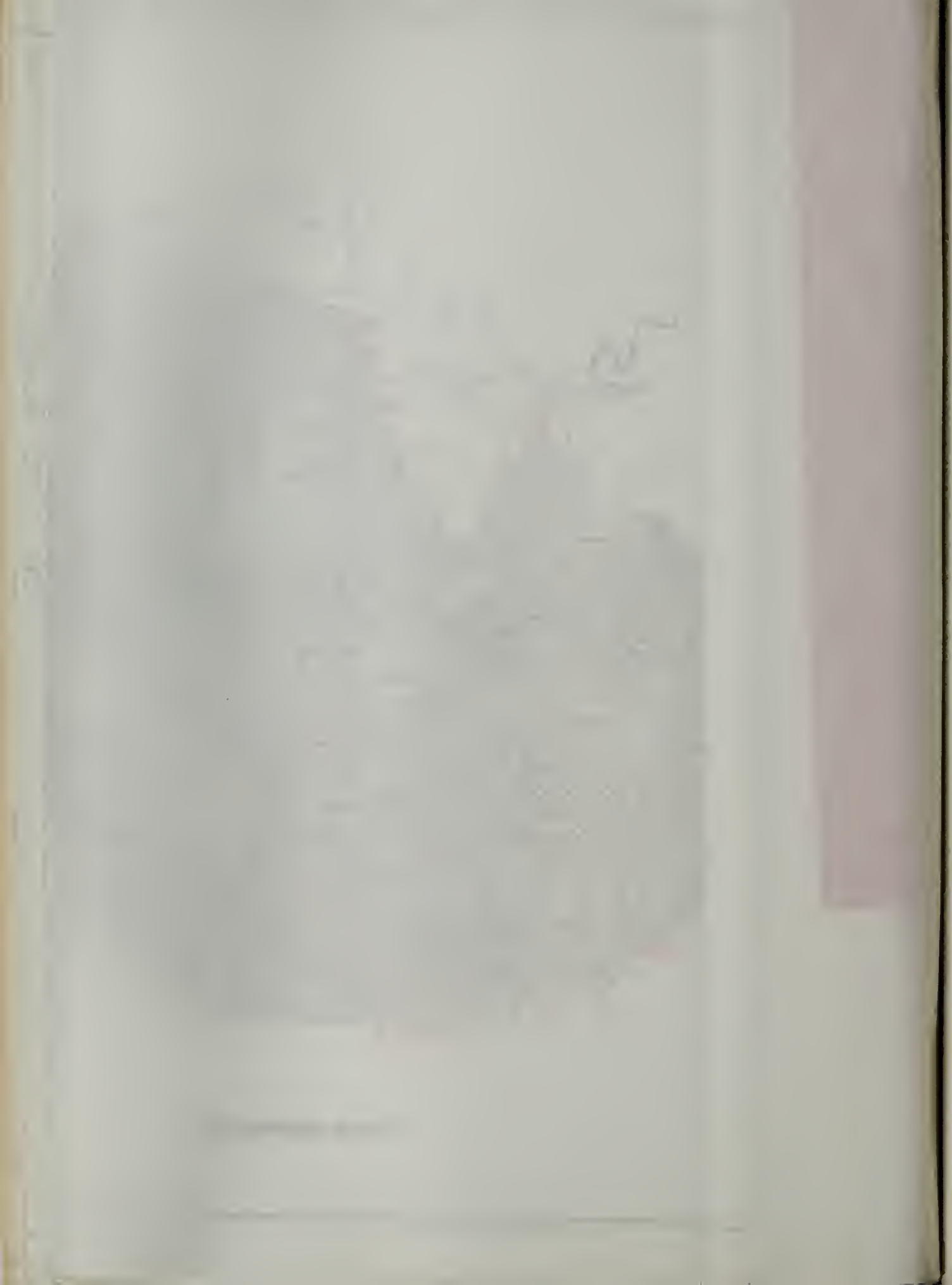
- LEGEND**
- 200' VALUES SHOWN ARE ELECTRICAL
CONDUCTIVITY MEASURED AT
WATER-TO-EARTH SURFACE
- 200' ESTIMATED VALUES
- PRINCIPLE HYPOTHETICAL SALT**
- CaHCO_3
 - CaMgHCO_3
 - CaMgSO_4
 - CaHCO_3
 - MgHCO_3
 - MgSO_4
 - NaHCO_3
 - NaSO_4
 - NaHCO_3
 - NaCl

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**GROUND WATER QUALITY
FRESNO-MADERA AREA**











LEGEND

AREAS WITHOUT DATA

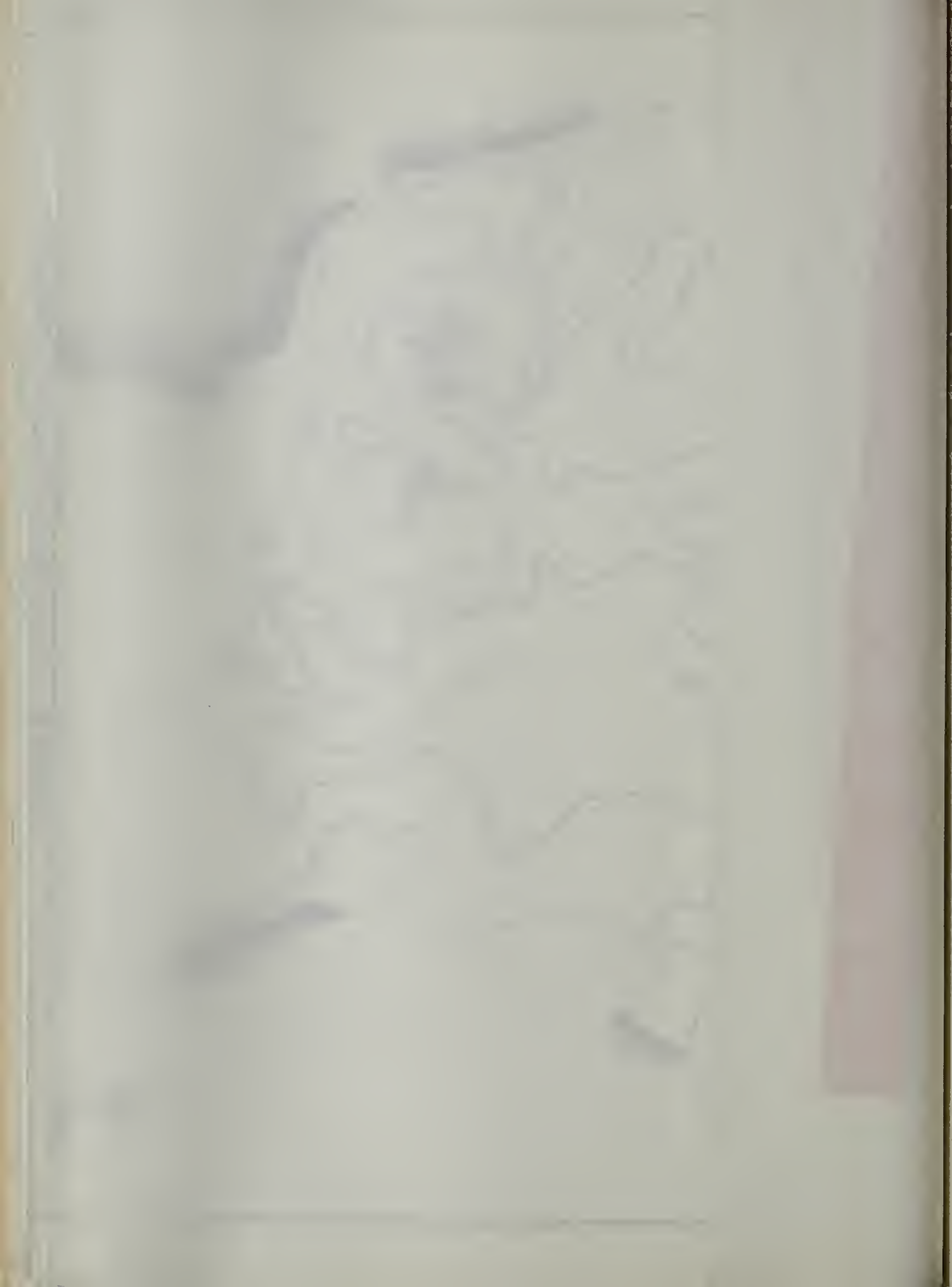
LINES OF EQUAL NITRATE CONCENTRATION (IN PARTS PER BILLION)

AREAS INSIDE OF WHICH CONTOUR LINES CONTAIN CONCENTRATION LESS THAN THE VALUE INDICATED IN PARTS PER MILLION (PPM)

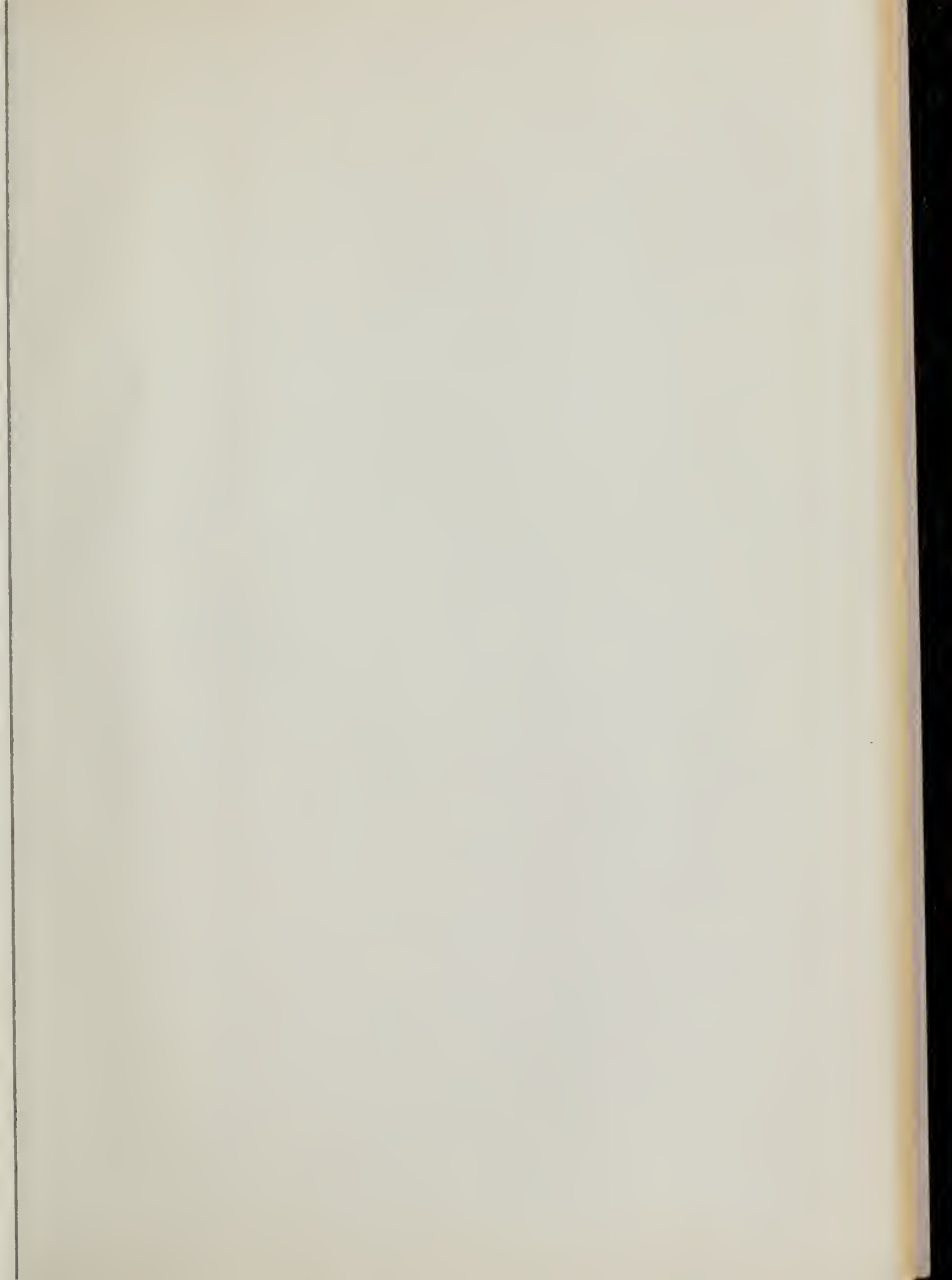
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SAN JOAQUIN DISTRICT
HYDROLOGIC DATA 1964

NITRATE CONCENTRATIONS
IN THE SAN JOAQUIN VALLEY
1961 THROUGH 1964

SCALE OF 100 MILES







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